

PUBLIC HEALTH REPORTS.

SUMMARY OF TRANSACTIONS OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE, FISCAL YEAR 1909, AND TO NOVEMBER 1, 1909.

ANTI-PLAGUE OPERATIONS ON THE PACIFIC COAST.

During the year 1909 no further cases of human plague occurred in San Francisco, and but four cases of rat plague, the last occurring October 23, 1908.

The operations of the service in San Francisco included the inspection of 5,681 persons, investigation of 344 cases of illness, and 96 necropsies. The rats caught numbered 156,059, of which 93,558 were examined. The premises inspected numbered 365,925; buildings disinfected, 4,572; buildings made rat-proof, 846; and nuisances abated, 48,299.

The effect of this work, with state and local cooperation, has been to place San Francisco in a satisfactory sanitary condition.

In Oakland no human plague occurred from July 17, 1908, to October 26, 1909, and no rodent plague since December 1 of the former year. On October 26, 1909, a case was reported which had received its infection in Contra Costa County. The number of cases of sickness investigated during the fiscal year was 170, and number of necropsies, 65. The rats caught numbered 25,889, of which 16,593 were examined, and 2 found to be infected with plague. The premises inspected numbered 2,550, and the buildings disinfected, 4,289.

At Los Angeles, on August 11, 1908, a case of human plague was reported, and shortly afterwards a ground squirrel was found with plague infection. A service officer was detailed from the hygienic laboratory to take charge of the laboratory provided by the local authorities. Between September 24, 1908, and April 12, 1909, when the medical officer was withdrawn, 13,922 animals were destroyed and examined for plague infection, including 4,722 ground squirrels and 8,977 rats. None were found infected.

In Seattle, Wash., during the fiscal year 51,750 rats were caught, and 48,652 examined. There was no case of human plague, but 10 rats were found infected, the last one September 26, 1908. There have been in all but 3 cases of human plague discovered in Seattle since the appearance of the first case October 16, 1907, the last case occurring October 25 of the same year.

PLAGUE AMONG GROUND SQUIRRELS.

In April, 1909, investigation revealed a widespread infection among ground squirrels in Contra Costa County, Cal. It is believed that no portion of Contra Costa County, which is some 744 square miles in extent, is free from this infection. About May 1, 1909, an

organized campaign was inaugurated by the service for the destruction of these animals under the charge of a commissioned medical officer. Inspectors, foremen, and laborers to the number of 30, visit the infected ranches and with local cooperation engage in the destruction of the squirrels by poisoning and shooting. Bulletins published by the bureau, containing all necessary information, are at the same time distributed. There have been to October 30, 44,843 squirrels destroyed, of which number 298 have been found to be infected. The warfare has been extended to adjoining counties, and an average of 300 squirrels a day are being destroyed. Four thousand, five hundred and eleven ranches have thus far (Oct. 30, 1909) been inspected. It will be necessary to continue this work for an indefinite period until all this plague infection has been eliminated.

PLAGUE IN OTHER COUNTRIES.

Plague has markedly diminished in India. For the fiscal year 1909 there were but 168,403 cases, as against 730,729 for the previous fiscal year, and more than 1,022,000 for the fiscal year 1907.

In South America the situation remains about the same as a year ago, the disease still existing in Ecuador, Peru, Chile, Uruguay, Brazil, and Venezuela. No cases were reported from Argentina. In Peru 1,192 cases with 560 deaths have been reported. In the West Indies, Trinidad was afflicted with 18 cases, 14 being fatal. The menace to the United States, therefore, still continues. Of special significance to the United States also were the outbreaks of this disease in Fayal and Terceira in the Azores. Unceasing vigilance will be required in quarantine administration to prevent the further introduction of this disease. Medical officers are on duty at Guayaquil, Callao, Rio de Janeiro, and La Guaira, and special instructions have been issued for close quarantine surveillance and for the destruction of rats aboard vessels.

TYPHOID FEVER.

Three years ago the Commissioners of the District of Columbia, on account of the continued prevalence of typhoid fever in Washington, requested the Public Health and Marine-Hospital Service to make an investigation to determine the cause of this continued prevalence. A board was therefore appointed, and has just completed its third report, which has been published as Hygienic Laboratory Bulletin No. 52. The board is still investigating, and will make a fourth report, which will terminate its labors. The investigations thus far made indicate that somewhat less than 10 per cent of the cases of typhoid fever are definitely attributed to infected milk.

The three years' study has shown that in 1906 infected milk, contact, and imported cases accounted for 30.93 per cent of the cases for that year, 48.46 per cent for 1907, and 46.76 per cent for 1908. The board states that it does not seem probable that for the seasons 1907 and 1908 Potomac water could have been directly responsible for much, if any, of the infection, and there is not yet sufficient evidence for positive conclusion as to just what part this river water has played in the causation of the disease in previous years. They call attention to the frequent neglect of the disinfection of excreta, and the need of

legal control of typhoid-fever patients, and typhoid-bacillus carriers, and the necessity in general of treating this disease as a contagious disease.

These reports have an additional value in presenting a standard method of investigating the causes of the prevalence of typhoid fever in a city, which standard has already been followed by the cities of Richmond and Pittsburg. Results obtained in the different cities from operations on the same plan become comparable and of greater practical utility.

The spread of typhoid fever through the pollution of interstate waters, particularly the Great Lakes, is an important sanitary problem, requiring congressional legislation. The service is represented by one of its officers on the Lake Michigan Water Pollution Commission, and its advice and assistance requested by the Niagara Frontier Pure Water Conference.

TUBERCULOSIS.

The service was adequately represented in the Sixth International Congress on Tuberculosis, at Washington, September 28 to October 5, 1908, both in the administrative and scientific work and the exhibit.

In the laboratory the presence of the tubercle bacillus in the market milk of Washington has been demonstrated, and its thermal death point determined (60° C. for 20 minutes). Experiments to determine whether the bacillus can be recovered from the blood of affected persons have given negative results. These studies are reported in Bulletin No. 57.

Under executive order of February 26, 1906, departmental employees have been examined for tuberculosis and certificates given.

The service has given advisory support to the Colored Antituberculosis League, established at the suggestion of one of its officers, by the colored people of the South. A working plan, together with the constitution and by-laws and form of membership certificate, has been published in the Public Health Reports, and the movement, which now embraces seven Southern States, promises good results.

At Fort Stanton, N. Mex., where the service has a sanatorium for the treatment of tuberculosis cases, with a reservation of 46 square miles, 399 patients have been cared for during the year.

While, of course, it is known that the outdoor treatment anywhere is efficacious, still the climate, the altitude, and dryness of air at Fort Stanton render it particularly available for the care of these cases. But there is more than a mere care of cases in the sanatorium idea. The patients in this institution come from the merchant marine of the United States, and by being sent to Fort Stanton are removed from the fore-castle, boarding houses, and hospitals, where they would undoubtedly infect others.

While great care is exercised in stating that patients are positively cured, there is undoubted evidence to that effect, as illustrated by the following: Some time ago two patients who had been discharged as absolutely cured from Fort Stanton were admitted, one in the marine hospital at Boston and the other at the marine hospital at Chicago, for diseases entirely distinct from tuberculosis and from which they died. The medical officers knowing that they had been discharged

as absolutely cured of tuberculosis were careful in the post-mortem examinations and found that there was absolutely no active pathological condition in the lungs. The healing had been complete.

RABIES.

An investigation has been made to determine the prevalence of rabies in the United States and its geographical distribution.

During the calendar year 1908 there were 111 deaths from this disease and 534 infected localities, as shown by reports of rabies among animals. The disease prevailed in 38 States, and Territories and the District of Columbia in the eastern three-fourths of the United States. No cases were reported from the Rocky Mountain and Pacific coast regions.

During the fiscal year the Pasteur treatment was administered to 130 persons at the Hygienic Laboratory. The "fixed virus" there prepared was furnished from time to time for use in the Canal Zone, and was sent to the health officers of several States. A bulletin on rabies, giving the results of these investigations and operations, has been published.

PELLAGRA.

Pellagra, a disease which has prevailed in certain parts of Europe for more than a century, has recently been reported from various parts of the country, notably the Southern States. Its apparent increase and severity and its suspected relationship to diseased corn make it a matter of great concern and economic importance.

A year and a half ago, recognizing that this disease was to become one of national importance, a special officer was detailed for its investigation, giving his whole time to this one disease alone, and four bulletins prepared by him on the subject have been published by the bureau, and statistical information is being obtained. Recently, within the past month, the investigation has been broadened by the appointment, with the approval of the Secretary of the Treasury, of a special commission for the investigation of pellagra, this commission consisting of 7 members, 5 of whom are connected with the Hygienic Laboratory of the service, and 2 connected with the large Government Hospital for the Insane, St. Elizabeth's, at Washington. Insanity being a frequent accompaniment of this disease, the superintendent of St. Elizabeth's was appointed on the commission, and also one of his assistants, especially noted as an expert in nerve pathology.

HOOK-WORM DISEASE.

Four pamphlets upon the subject of hook-worm disease have been published, and an officer who has specially investigated this disease has been detailed to address several public-health and medical associations on the subject.

Failure of requested legislation has prevented a campaign of education in conjunction with the state boards of health, which had been contemplated.

A report on hookworm disease in its relation to child labor, requested by the Secretary of the Department of Commerce and Labor,

has recently been completed. This report was prepared by Dr. Ch. Wardell Stiles, Chief of the Division of Zoology of the Hygienic Laboratory. His conclusions on the subject of child labor in the South are not in harmony with those popularly entertained. He is of the opinion that this subject involves questions which give to it an aspect quite different from that of child labor in the North, and his conclusions can best be summarized by his statement that if he had to choose between placing his own 10-year-old daughter in the spinning room of a cotton mill and placing her on the average small tenant farm of the South he would be obliged in the best interests of the child to send her to the mill. In 1902, when Doctor Stiles pointed out the widespread prevalence of hookworm disease in the South, his views were regarded by some as extreme, but to-day it is generally admitted that those views were correct and there are gratifying indications of a popular awakening of public sentiment, which will eventually lead to an improvement in the sanitary conditions.

During the present fiscal year Doctor Stiles has inspected 26 factories in New England, including 16 cotton mills and 1 knitting mill, but in an examination of the 1,437 cotton-mill hands seen he has failed to find a single case of that severe type of anæmia (known as "cotton-mill anæmia") which he found in 12.6 per cent of the cotton-mill hands of the South. As the New England mills are using southern cotton, and as the mill hands are therefore breathing in the same kind of lint as are the southern cotton-mill hands, these observations give an additional proof of the error of the popular idea that the condition of the latter mill hands is due to the breathing in of lint. Such an array of data is now on hand not in harmony with the lint theory that when all facts are published he believes public opinion on this theory will of necessity undergo a change.

Hookworm disease is entirely due to soil pollution, and in order to awaken popular interest in the subject of soil pollution in connection with the disease Doctor Stiles, in connection with his other duties, has been given several details to lecture on the subject. In addition he has given 25 popular and technical lectures on this subject in five States without expense to the Government.

While the eradication of hookworm disease within a State is primarily the duty of its sanitary authorities, nevertheless, on account of the widespread distribution of the disease and its baneful influence on the population of the country as a whole the Federal Government should cooperate with state authorities, and this cooperation should include especially a widespread campaign of education regarding the measures necessary to prevent the transmission of hookworm disease and treatment of the large number of persons afflicted in different sections of the country.

The gift of a million dollars by Mr. Rockefeller, and the appointment by him of a commission for the purpose of eradicating this disease is a matter of great import. It should be remarked, too, that Mr. Rockefeller's noble gift is not restricted in its use to the interest upon an endowment, but that it provides for the expenditure for five years of \$200,000 each year.

One of the members of this commission is Doctor Stiles, who has devoted himself so assiduously to this subject, and who is Chief of the Division of Zoology in the Hygienic Laboratory.

LEPROSY.

In 1905 Congress appropriated \$100,000 for the erection of a leprosy investigation station on the island of Molokai, in Hawaii. Great difficulty was experienced in erecting the buildings, on account of the difficulty in securing labor, caused by the fear of the disease. The investigations, however, were begun in a temporary laboratory in Honolulu. The station at Molokai, some 60 miles distant, is now completed and is about ready for occupancy.

The results obtained thus far in the investigations made at the receiving station in Honolulu are embodied in six reports, which have been published.

The investigation of incipient cases at Honolulu will continue even after the main station at Molokai is opened, as such cases present the best opportunity for the study of early methods of diagnosis and means of relief. Studies are being made of the pathological anatomy of the nasal cavity in leprosy; treatment of incipient cases of leprosy with tuberculin, atoxyol, strychnine, chaulmoogra oil, and cinnamate of soda; examination of the urine of lepers for acid-fast bacilli, and attempts to grow the *lepra bacillus* on several media.

On the other hand, experiments on animals and such other work as requires large amounts of leprosy material can best be carried on at the station on Molokai, where the service has full control of the patients under its care. Both lines of investigation are of importance; each assists the other, and together they form a comprehensive plan that should bring about results for which the investigation was begun.

The many problems that leprosy presents has for convenience been grouped into two classes:

The first class includes four important problems, namely, the growth of the *lepra bacillus* on artificial media; the successful inoculation of the lower animals; the discovery of a substance analogous to tuberculin, of use as a remedial or diagnostic agent; the discovery of the usual mechanism whereby the infection spreads from one person to another.

In the second class are included lesser problems that step by step add to our knowledge of the disease, and while not apparently of so great immediate importance yet may indicate the path that leads to the solution of the greater problems mentioned.

The investigations inaugurated have for their primary object the solution of the greater problems mentioned, but it is realized that scientists in many lands have sought in vain for their solution, and years may elapse before success is attained.

If, however, efforts were thus confined the station might continue its work for years without obtaining results worthy of publication, and the greatest utility to the sanitary and scientific world would not be subserved. Every effort will therefore be made to throw all possible light on different phases of the leprosy problem, and it is expected that results will be obtained from time to time that permit of positive opinions and announcements.

With a well-equipped station and laboratory, an abundance of clinical material, and a well-trained corps of scientific workers, it is reasonable to expect that interesting and useful knowledge bearing on leprosy will be obtained.

The service was represented by the director of this station at the Second International Congress Against Leprosy, held in Bergen, Norway, August 16 to 19, 1909, and his report has been published.

YELLOW FEVER.

There has been no yellow fever in the United States, and a marked absence of this disease during the active quarantine season of 1909, in Cuban, Mexican, West Indian, Central, and South American ports. This great improvement in the yellow fever situation is attributed to the greater attention being paid to sanitation.

CHOLERA.

Cholera being prevalent in Russia, an officer was detailed in the office of the United States consul at Libau, which is the only port in Russia from which vessels carrying emigrants sail direct for the United States. Cholera was reported in Rotterdam August 26, 1909, and an officer on duty at Naples was sent to that port to assist the consul in enforcing the Treasury regulations. The outbreak, however, was of short duration, the disease being a recent importation from Russia, and terminated about September 11, there having been 13 cases and 5 deaths. In Manila there were 981 cases and 23,094 cases in the provinces of the Philippine Islands.

SMALLPOX.

In the United States, 42 States, 1 Territory, and the District of Columbia reported 24,657 cases of smallpox, with 75 deaths, being 6,543 cases and 6 deaths less than reported for the fiscal year 1908. During the fiscal year 1902 there were reported 55,857 cases, with 1,852 deaths. Since then the number of cases and deaths has gradually diminished.

VACCINE VIRUS AND ANTITOXINS.

Twenty-one establishments were licensed by the department, 10 of them being foreign, under the act approved July 1, 1902. Investigations during the year demonstrated that foot-and-mouth disease may be transmitted to animals through vaccine virus. An outbreak of this disease was traced to the vaccine virus of two establishments. The license of one firm, which had expired, was not renewed, and the license of the other was suspended until all infected virus had been withdrawn from the market and the infection eradicated. The infection was due to importation from abroad, and revised regulations were therefore issued which will effectually control the importation of this product, whether intended for sale or for laboratory purposes.

HYGIENIC LABORATORY.

The additions to the building, provided by Congress, and trebling its capacity, were completed during the year. Nine bulletins containing the results of scientific investigations were issued. The total personnel of the laboratory numbers 60.

Besides the above, the laboratory has an advisory board, composed of representatives of the three medical services of the Government, and the Bureau of Animal Industry, and five others, representing laboratories devoted to like research. These five members are: Prof. William T. Sedgwick, of the Massachusetts Institute of Technology; Prof. Victor C. Vaughn, of the University of Michigan; Prof. Simon Flexner, of the Rockefeller Institute for Medical Research; Prof. William H. Welch, of the Johns Hopkins University; and Prof. Frank Wesbrook, of the University of Minnesota. Through this advisory board the Hygienic Laboratory is kept in touch with investigations in other laboratories, and has advice regarding investigations being made or to be made in the government institution.

RELATIONS TO THE PHARMACOPŒIA.

In 1908 the board of trustees of the United States Pharmacopœia convention called upon the bureau to undertake the publication of a series of bulletins embodying digests of comments on the pharmacopœia. This work was begun in the Division of Pharmacology of the Hygienic Laboratory, and the first digest of comments was compiled and published during the fiscal year as Bulletin No. 49 of the Hygienic Laboratory. In beginning the work it was decided to compile the material chronologically so as to present the available comments in proper sequence. The above-mentioned bulletin therefore deals with literature of the latter half of 1905, representing the period from the publication of the eighth decennial revision of the pharmacopœia to December 31, 1905.

The comments contained in this bulletin are interesting and indicative of current opinions regarding the future of this work and the development of the Division of Pharmacology. In most foreign countries the pharmacopœia is a government publication, and its preparation is purely a governmental function. For eighty-five years the pharmacopœia of the United States has been by contrast a wholly private enterprise, compiled, developed, and published by members of a voluntary organization, and attaining a legal status only gradually through the enactment of statutes by the several States which recognized its standards. Through recent national legislation this publication has become the federal standard, and the significance and far-reaching effects of this change of status are shown by the fact that within a year some revision of the pharmacopœia was made necessary. The problem now to be faced by the Government and by the makers of the pharmacopœia is, what shall be the attitude of each to the other with reference to what has been termed "a sanitary institution of the first rank."

It is gratifying that the work already done by the Government has been welcomed and accepted as evidence that the relation of the Federal Government to the pharmacopœial convention is to be that of cooperation without domination.

The first volume of digests already published has been accepted by those interested as an expression of governmental interest in a volume of national consequence, and that such interest is second only to the legislative action making it the official standard in this country.

A second digest of comments on the pharmacopœia has been prepared and submitted for publication as Bulletin 58 of the Hygienic

Laboratory. This second bulletin covers the literature for the calendar year ended December 31, 1906. This period was one of unusual interest and activity in matters relating to the Pharmacopœia of the United States.

The enactment of the food and drug act June 30, 1906, and the signing November 29, 1906, of an agreement by the United States and other powers for the unification of the pharmacopœial formulas for potent drugs make the pharmacopœia a legal standard, for the development of which, in part at least, the Government has incurred treaty obligations.

Since the Pharmacopœia of the United States and the National Formulary have become legal standards, the medicaments to be incorporated require careful study and the collection of disinterested information. This is necessary, inasmuch as not only powerful financial interests but the maintenance of the public health are involved. In accordance with a resolution adopted by the American Pharmaceutical Association, the second digest of comments that has been prepared relates also to the National Formulary.

Besides the compiling and publication of a series of comments there is also a great deal of important work to be done in relation to the remedies to be incorporated in the pharmacopœia, and the chairman of the revision committee has advocated the carrying on of such work in a government proving laboratory. The necessary test for the identity and purity of official remedies should be elaborated by workers who are free from the stress of commercial self-interest and competition, and such work can be carried on in the Hygienic Laboratory, where the methods of making official preparations of official drugs and the standardizing of such preparations when so made should also be done.

Much work has been carried on in the Division of Pharmacology in relation to therapeutic remedies. In view of the coming pharmaceutical convention, the chairman of revision requested that some additional work be undertaken on the determination of melting points and boiling points in the pharmacopœia. He pointed out that the melting point and boiling point of the various substances contained in the present pharmacopœia had not all been determined by the same method, and that chemists and physicists were not united on the best and simplest means of determining these factors. He stated that there was necessity for uniform method of taking the melting point and boiling point, and requested that tests be made, and comparative tables be prepared for use in the next revision of the pharmacopœia. It was decided, with the approval of the Secretary of the Treasury, to undertake this work, and investigations are now in progress for the determination of the physical constants of pharmacopœial substances, which includes boiling point, melting point, and solubilities.

The results of investigations into the relation of the iodine content to the physiologic activity of thyroid preparations, the physiological standardization of suprarenal preparations, and such drugs as digitalis, into the toxicity of acetanilid mixtures, and the standardization of antitetanic serum, which have been published, will be of value to members of the pharmaceutical convention.

Closely related with the work of the service in connection with the United States Pharmacopœia is its cooperation with the American

Medical Association in the work of the Council on Pharmacology and Chemistry, four of whose members are government officials, two of them in the Division of Pharmacology. In addition to the routine work carried on in connection with the council with reference to the general question of new remedies, it has been shown in the Division of Pharmacology that digalen, a widely advertised preparation, under certain conditions becomes inert. There has also been demonstrated the variability of the extremely potent suprarenal preparations. Many unofficial drugs which have been used to a greater or lesser extent, some of them official at one time or another, are being studied with a view to determining whether they are of sufficient merit to justify therapeutic use.

SANITARY CONFERENCES AND ADVISORY BOARD.

The Seventh Annual Conference of State and Territorial Health Officers with the Public Health and Marine-Hospital Service was held in Washington June 2 and 3, 1909. Twenty-six States and Territories and the District of Columbia were represented. The discussions illustrated the value of this official organization.

The advisory board of the Hygienic Laboratory was convened on March 26, 1909. Investigations conducted in the laboratory were discussed, and the advice of the board obtained with regard to the continuation of the same and the inauguration of new investigations.

The United States Government has been represented in the International Office of Hygiene at Paris by the detail of Surg. H. D. Geddings. Doctor Geddings is stationed now at Naples, Italy, supervising the medical inspection of emigrants leaving that port, and signing bills of health. It is so arranged that when occasion demands he can attend the meetings and represent this Government at the International Office of Hygiene in Paris. The service has also maintained its interest in the International Sanitary Bureau of the American Republics in Washington, and through a resolution passed by each body this bureau was brought into relations with the Office of Hygiene in Paris.

The Twelfth International Congress on Alcoholism was held in London July 18 to 24, 1909. The congress was well attended, there being about 1,400 members and practically all civilized countries being officially represented. Among the speakers were members of Parliament, prominent lawyers, including the lord chief justice, officers of the English navy and army, including the surgeon-general, railway officials, teachers, clergymen, and others.

Dr. Reid Hunt, Chief of the Division of Pharmacology, in his report of the meeting states that it seemed to be the consensus of opinion that alcohol in any form is but seldom of distinct value in the treatment of disease; also that some evidence was brought forward to show that alcohol even in moderate amounts has an unfavorable effect upon subsequent offspring and a tendency to lower resistance to infection. The danger of alcohol to those with any tendency to nervous or mental diseases was especially emphasized, as were also the effects upon children.

Statistics were presented showing that there has been a marked decrease in the use of alcohol in hospitals. The statement was also made that the only pharmacopœias which included whisky were those of the United States and Greece, and it was suggested that its

recognition in this way gave it an undue prominence as a medicinal agent.

Another point brought out was the extraordinary growth of total abstinence in the British army and navy. Forty per cent of the army in India are said to be total abstainers. The surgeon-general of the British army attributes this growth of total abstinence to the improvements that have been made in the housing and feeding of the soldiers.

The congress was held under the auspices of the British Government. The next meeting will be at The Hague in 1911.

NATIONAL QUARANTINE.

At the 44 quarantine stations in the continental United States, 8,266 vessels were inspected, of which 520 were disinfected. Inspection has been maintained on the Mexican border.

National quarantine has been administered at 7 ports in the Philippine Islands, 7 in Hawaii, and 8 in Porto Rico.

Medical officers have been stationed at 8 fruit ports in Central America to enforce special regulations relating to fruit vessels to permit their entry into the United States without detention.

Details have also been made to ports in Cuba, Mexico, Barbados, and St. Thomas, to Rio de Janeiro, Callao, Guayaquil, Naples, Calcutta, and to two ports in China and three in Japan. The officers have exercised quarantine supervision over vessels bound for the United States, and at a number of foreign ports have examined aliens by request of the Immigration Bureau and steamship companies. By request of the Venezuelan authorities, on account of the bubonic plague, an officer was detailed for duty at La Guaira; one also for immigration and quarantine service at Amoy, China, by request of the United States consul, with special reference to the protection of the Philippines.

In view of the establishment of a new line of steamers, plying from Salina Cruz and Manzanillo, on the Mexican-Pacific coast, direct to Honolulu, officers were appointed for the disinfection of vessels at the two Mexican ports named to prevent the introduction of yellow fever into the Hawaiian Islands, where this disease is at present unknown, but where the conditions are ripe for its spread should it be introduced.

MEDICAL INSPECTION OF IMMIGRANTS.

During the fiscal year 966,124 immigrants were inspected under the immigration laws and regulations, and 14,536 were certified for rejection on account of physical and mental defects. The inspections were conducted at 58 stations in the continental United States, Canada, Porto Rico, and Hawaii, but do not include the examinations in the Philippines or at foreign ports. Personal examinations were made of 965 aliens reported as public charges in various institutions throughout the United States to ascertain whether they should be deported under the immigration laws.

Service officers have also, under the supervision of the Commissioner of Immigration, conducted the large hospital for immigrants at Ellis Island, where 6,186 patients were admitted for treatment during the year.

SERVICE PUBLICATIONS.

During the year 246,060 copies of the various publications edited in the bureau were distributed. These include the annual report, the Weekly Public Health Reports, the bulletins of the Hygienic Laboratory, and various special bulletins relating to the public health. A new edition of the bulletin entitled "Milk and its Relation to the Public Health" has been published.

MARINE HOSPITALS.

In the 21 marine hospitals owned by the Government, and at the 126 other stations where seamen of the merchant marine receive hospital and dispensary treatment, there were treated during the fiscal year 53,074 patients, of which number 14,209 were treated in hospital, and 38,865 at the dispensaries. The new marine hospital at Buffalo, N. Y., has been completed, and is occupied.

Physical examinations, exclusive of immigrants, were made of 4,980 persons connected with the Revenue Cutter, Life Saving, Steamboat Inspection, Immigration, and Light House services, the Coast and Geodetic Survey, Civil Service Commission, Isthmian Canal Commission, and Philippine service.

PERSONNEL.

At the close of the fiscal year there were 128 commissioned medical officers, namely: The Surgeon-General, 5 assistant surgeons-general, 35 surgeons, 66 passed assistant surgeons, and 21 assistant surgeons.

There were also 279 acting assistant surgeons, a total of 407 medical officers.

There were also 45 pharmacists.

Commissioned medical officers have served on special duty during the year as follows: Three have served with the Isthmian Canal Commission, respectively as director of hospitals, chief quarantine officer, and in charge of the quarantine at Panama, and quarantine officer at Colon.

Two officers have been continued as chief quarantine officer and director of health and as assistant director of health of the Philippine Islands, respectively.

One officer, under the act of February 15, 1893, has been continued for duty at Guayaquil, Ecuador.

Fourteen officers are assigned to exclusive immigration duty for the physical and mental examination of aliens, their services being supplemented by employment of acting assistant surgeons.

Six officers are detailed to the quarantine service of the Philippine Islands.

Seven officers are detailed for service upon vessels of the Revenue-Cutter Service.

Twenty-three officers are detailed at the several quarantine stations in the continental United States, in Porto Rico, and the Hawaiian Islands.

One surgeon, 4 passed assistant surgeons, and 1 assistant surgeon are assigned to duty in foreign countries to prevent the introduction into the United States of epidemic disease.

MERCURIC CHLORIDE AS AN INSECTICIDE.

By G. M. GUITERAS, Surgeon, United States Public Health and Marine-Hospital Service.

The idea of using corrosive sublimate as an insecticide was obtained from G. F. Matzke, steward on the American schooner *Beecham*, who stated to the writer that he had used it in the cabin of his vessel with success.

A partial study (partial on account of the limited facilities at command) of the literature on the subject appears to show that the use of mercuric chloride in this connection has not heretofore been mentioned. A few experiments were therefore undertaken, especially with the object of demonstrating the usefulness of the agent as a mosquitocide.

The experiments were conducted in a room 12 feet high by 15 feet by 13½ feet, having a capacity of 2,385 cubic feet. Two large windows and one door opened into the room. The room, which is used as a laboratory, contained a gas stove, 2 cupboards, a couch, tables, and chairs.

The results were as follows:

First experiment.—In the apartment mentioned, on September 14, 1909, 60 grams of mercuric chloride were sublimed in a porcelain evaporating dish, the room being sealed and kept closed for 2 hours. A mosquito cage with a capacity of 1 cubic foot, covered with wire gauze and containing about 20 mosquitoes, was exposed close to the ceiling of the room. All mosquitoes found dead. Fly in a powder box, killed. Bed bugs in a powder box, 50 per cent dead; others stunned. Croton bugs in powder box, a few dead; majority alive, but not active. Croton bugs in powder box between 2 layers of blanket, all alive, but activity lessened. With the exception of the mosquito cage, which, as stated, was placed near the ceiling, the insects were distributed about the room, on tables, and on the floor. Temperature of room about 86° F.

Second experiment.—September 15, 1909. Thirty grams of mercuric chloride, 3 hours' exposure. Mosquitoes in cage near ceiling, all killed. Roaches and bedbugs unharmed. Temperature about 85° F.

In the remaining experiments 3 mosquito cages were used, 2 of them being 12 inches square by 5 inches in height and one 8 inches square by 4 inches in height. They were all covered with wire gauze.

Third experiment.—October 2, 1909. Sixty grams mercuric chloride, 3 hours' exposure. One mosquito cage under couch against wall with blanket covering reaching to within 3 inches of floor. Two dead, 2 alive and fairly active. One mosquito cage inside of cupboard, cage covered with towel; cupboard door left ajar about 4 inches. Four dead; 1 alive, but incapable of flight. One mosquito cage on top of cupboard, about 8 feet from floor; cage covered with towel. Eight insects, all dead. Temperature of room, 77° F.

Fourth experiment.—October 3, 1909. Conditions the same as in experiment No. 3, except that the temperature of the room at the beginning of the experiment was 80° and at the close 88° F.

Cage No. 1. Seven insects. Cage No. 2. Nine insects. Cage No. 3. Six insects. All mosquitoes apparently dead. On examina-

tion of the cages 24 hours after fumigation one mosquito was found with slight movement of the legs, but otherwise unable to move. Some hours afterwards it was dead.

Fifth experiment.—October 15, 1909. Cage No. 1. Ten insects. Cage No. 2. Twelve insects. Cage No. 3. Eight insects. Temperature at beginning, 80° and at close 84° F. Sixty grams of mercuric chloride used, time of experiment 3 hours. Bedbugs under one layer of blanket, alive. Bedbugs under 2 layers of blanket, alive. Roaches under one layer of blanket, alive. Bedbugs under 4 layers of huckaback toweling, 1 dead, 2 alive. Bedbugs under 4 layers of crash toweling, 1 dead, 2 alive. Bedbugs exposed in powder boxes, alive. Roaches in powder boxes, alive. Grasshopper, alive. Flies exposed in powder boxes, dead. Mosquito cage No. 1. Under couch covered to 3 inches from floor, 9 dead; 1 alive, slight motion only. Cage No. 2. On top of safe, covered with towels, all dead. Cage No. 3. In closet, cage covered with towels, 6 dead; 2 alive, slight motion only. The live mosquitoes were kept under observation and none of them retained sufficient vitality to fly.

About 20 minutes are consumed in subliming 60 grams of mercuric chloride. Brass work is not tarnished. Nickel-plated ware and instruments are untarnished if wiped off immediately after fumigation. Painted surfaces are unaffected unless the mercuric chloride is sublimed close thereto and not wiped off immediately. Does not affect colored silk, cotton or woolen goods.

It is evident that temperature plays an important part in the efficiency of mercuric chloride as a mosquitocide, as shown by experiment 3, where the temperature was 77° F. And this is only to be expected, for a low temperature will tend to deposit the mercuric chloride more quickly, and thus prevent its rapid circulation. It is effective, however, at temperatures above 80° F., and in the vast majority of cases in yellow fever work we would not have to contend with a temperature lower than this.

From these experiments it would appear that there is a field of usefulness for sublimed mercuric chloride as a mosquitocide. It seems to be effective for mosquitoes and flies.

In the experiments herein recorded, while some mosquitoes, under considerable protection, were not killed outright, still they never recovered completely from the intoxication, except in experiment No. 3, where the temperature was only 77° F. Further experiments are, however, necessary to determine this positively.

The advantages of this agent are as follows: (1) Facility of obtaining mercuric chloride. (2) Small quantity necessary. (3) Simplicity. All that is required is a good alcohol lamp and a porcelain evaporating dish. The alcohol lamp may be so gauged as to burn only for the time required for the sublimation of the mercuric chloride. This certainly is more convenient than carrying about heavy iron pots and barrels of sulphur. (4) No unfavorable action on bright metal surfaces if wiped off within a few hours; no untoward action on dress goods; no disagreeable odor remains. (5) The cost of this process is about the same as or, indeed, cheaper than sulphur disinfection.

In these experiments 25 grams were used to the 1,000 cubic feet. At the market price of mercuric chloride—that is, \$1 per pound—the amount of mercuric chloride required per 1,000 cubic feet—that is, 25 grams—will cost 0.04725 cents.

For destruction of mosquitoes by sulphur, 2 pounds of sulphur are usually used per 1,000 cubic feet. The market price of sulphur at 3 cents per pound would make the cost 6 cents per 1,000 cubic feet. In addition, in practical work on a large scale the expense and trouble of hauling the disinfecting equipment from one place to another would be much diminished.

A very natural objection may occur to many to the use of this agent in the manner herein described, on account of the distribution of such quantities of so active a poison as mercuric chloride. But I think the danger more apparent than real. When the room was opened in the above experiments it was filled with a thick mist of the sublimed mercuric chloride. The room was entered without any special precaution and the windows were opened. In a few minutes the sublimed mercuric chloride was carried away by the slight air currents prevailing, leaving a slight deposit on surfaces within the room. This was allowed to remain for 2 or 3 days, the room being used in the meantime without any untoward results. The deposit, however, can be readily removed with a damp cloth, and this should be done. With very ordinary care I can see no danger in the use of mercuric chloride in the manner above described.

In conclusion, I believe that while mercuric chloride can not altogether take the place of sulphur as an insecticide it has a sphere of usefulness hitherto unrecognized, especially with reference to flies and mosquitoes.

ON THE RELATION OF ROCKY MOUNTAIN SPOTTED FEVER TO THE TYPHUS FEVER OF MEXICO.—A PRELIMINARY NOTE.

By John F. Anderson, Director Hygienic Laboratory, and Joseph Goldberger, Passed Assistant Surgeon, United States Public Health and Marine-Hospital Service.

Several observers and writers have called attention to the close clinical resemblance of Rocky Mountain spotted fever to typhus. One of us having seen typhus fever in England, and later the spotted fever in Montana, was also struck by the clinical similarity of the two diseases.

Typhus fever being one of the quarantinable diseases under the regulations of the Treasury Department, it seemed desirable both on theoretical and practical grounds to take up the study of typhus fever in Mexico in order to determine whether the two diseases are really identical, particularly as the work of Ricketts had developed a basis for the identification of the Rocky Mountain disease. Ricketts has shown that Rocky Mountain spotted fever has a definite clinical course in certain animals, particularly guinea pigs and monkeys, in which it also produces characteristic anatomical lesions. He has shown that in the guinea pig, after intraperitoneal inoculation of blood of spotted fever, there appears in from 2 to 5 days a distinct rise in the temperature of the animal. The fever continues to rise for 2 or 3 days, after which it maintains itself at about the level which it has attained for 2 or 3 days longer. At the end of this time the animal either dies or the fever begins to subside. The objective signs of the infection are a roseolar eruption, with hemorrhage into and frequently gangrene of the external genitals. At necropsy the most striking features are a greatly enlarged spleen and swollen and hemorrhagic lymph nodes.

With these facts in mind, we took up the study of typhus as it presents itself in Mexico City. Our observations of the disease in the Hospital General bring out certain definite clinical differences between this disease and the Rocky Mountain fever. These differences we will discuss in a later paper.

Experimentally, in guinea pigs, the intraperitoneal injection of blood drawn from patients between the eighth and fifteenth day after the onset of typhus fever has failed to produce either the signs or symptoms above briefly described for Rocky Mountain spotted fever. We have made similar inoculations into monkeys, rabbits, and rats, the results of which we are not as yet in a position to present. In our opinion, however, the negative results in the guinea pig are conclusive evidence of the nonidentity of the two diseases.

For the laboratory and clinical facilities which we have enjoyed we are greatly indebted to many of our Mexican friends and colleagues, amongst whom, even in this brief note, we can not forbear to mention Drs. Eduardo Liceaga, Octaviano Gonzalez-Fabella, Fernando Lopez, and Genaro Escalono.

UNITED STATES.

[Reports to the Surgeon-General, Public Health and Marine-Hospital Service.]

Plague-prevention work in California.

Surgeon Blue reports:

SAN FRANCISCO, CAL.

Last case of human plague: Sickened, January 30, 1908.

Last case of rodent plague: Trapped, October 23, 1908.

Week ended November 20.

Premises inspected.....	181
Houses destroyed.....	3
Buildings condemned.....	15
Nuisances abated.....	32
Poisons placed.....	8,850
Rats trapped.....	1,719
<hr/>	
Rats identified:	
<i>Mus norvegicus</i>	1,261
<i>Mus rattus</i>	78
<i>Mus musculus</i>	338
<i>Mus alexandrinus</i>	42
Total.....	1,719
<hr/>	
Rats examined bacteriologically.....	1,239
Rats found infected with <i>B. pestis</i>	0
Total number of rats found infected to date.....	398

OAKLAND, CAL.

Last case of human plague: Sickened, October 26, 1909.

Last case of rodent plague: Found, December 1, 1908.

Week ended November 20.

Dead inspected.....	33
Plague.....	0
Necropsies held.....	3
Rats found dead.....	32
Rats trapped.....	556
Rats identified:	
Mus norvegicus.....	542
Mus musculus.....	45
Mus alexandrinus.....	1
Total.....	588
Rats examined bacteriologically.....	543
Rats found infected with <i>B. pestis</i>	0

ALAMEDA COUNTY, CAL. (EXCLUSIVE OF OAKLAND).

Last case of human plague: Sickened 2 miles southwest of Sunol, September 24, 1909.

Last case of rodent plague: Found October 31, 1909.

Week ended November 20.

Dead inspected.....	61
Plague.....	0
Necropsies held.....	3
Ground squirrels found infected with <i>B. pestis</i> ^a	1
Total number of ground squirrels found infected to date.....	54
Total number of wood rats found infected to date.....	1

Plague infected ground squirrel obtained from the following place:

October 31, 1909.

P. Barthe Ranch, Altamont.....	1
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CONTRA COSTA COUNTY, CAL. (EXCLUSIVE OF POINT RICHMOND.)

Last case of human plague: Sickened July 21, 1908.

Last case of rodent plague: Found September 27, 1909.

Week ended November 20.

Dead inspected.....	2
Plague.....	0
Total number of ground squirrels found infected to date.....	240

FRESNO COUNTY, CAL.

No record of human or rodent plague in Fresno County.

^a This was one of the 212 ground squirrels enumerated as bacteriologically examined for the week ended November 6 with negative results and which was later proved to have been plague infected.

Week ended November 20.

Ranches inspected.....	13
Ground squirrels shot.....	149
Rabbits shot.....	2
Ground squirrels found dead.....	2
Ground squirrels examined bacteriologically.....	144
Ground squirrels found infected with <i>B. pestis</i>	0
Rabbits examined bacteriologically.....	2
Rabbits found infected with <i>B. pestis</i>	0

KERN COUNTY, CAL.

No record of human or rodent plague in Kern County.

Week ended November 20.

Ranches inspected.....	7
Ground squirrels shot.....	65
Ground squirrels examined bacteriologically.....	63
Ground squirrels found infected with <i>B. pestis</i>	0

MERCED COUNTY, CAL.

No record of human or rodent plague in Merced County.

Week ended November 20.

Ranches inspected.....	32
Ground squirrels shot.....	619
Ground squirrels examined bacteriologically.....	601
Ground squirrels found infected with <i>B. pestis</i>	0

MONTEREY COUNTY, CAL.

No record of human or rodent plague in Monterey County.

Week ended November 20.

Ranches inspected.....	29
Ground squirrels shot.....	250
Ground squirrels examined bacteriologically.....	245
Ground squirrels found infected with <i>B. pestis</i>	0

SAN JOAQUIN COUNTY, CAL.

No record of human or rodent plague in San Joaquin County.

Week ended November 20.

Ranches inspected.....	10
Ground squirrels shot.....	21
Ground squirrels examined bacteriologically.....	19
Ground squirrels found infected with <i>B. pestis</i>	0

SAN LUIS OBISPO COUNTY, CAL.

No record of human or rodent plague in San Luis Obispo County.

Week ended November 20.

Ranches inspected.....	30
Ground squirrels shot.....	279
Rabbits shot.....	2
Ground squirrels examined bacteriologically.....	269
Ground squirrels found infected with <i>B. pestis</i>	0
Rabbits examined bacteriologically.....	2
Rabbits found infected with <i>B. pestis</i>	0

SANTA BARBARA COUNTY, CAL.

No record of human or rodent plague in Santa Barbara County.

Week ended November 20.

Ranches inspected.....	29
Ground squirrels shot.....	195
Ground squirrels examined bacteriologically.....	189
Ground squirrels found infected with <i>B. pestis</i>	0

SANTA CRUZ COUNTY, CAL.

Last case of rodent plague: Found, November 6, 1909.

Week ended November 20.

Ranches inspected.....	7
Ground squirrels shot.....	72
Ground squirrels examined bacteriologically.....	68
Ground squirrels found infected with <i>B. pestis</i>	1
Total number of ground squirrels found infected to date.....	1

Plague-infected ground squirrel obtained from the following place:

November 6, 1909.

Lombardi ranch, Santa Cruz.....	1
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TULARE COUNTY, CAL.

No record of human or rodent plague in Tulare County.

Week ended November 20.

Ranches inspected.....	45
Ground squirrels shot.....	50
Rabbits shot.....	2
Ground squirrels examined bacteriologically.....	48
Ground squirrels found infected with <i>B. pestis</i>	0
Rabbits examined bacteriologically.....	2
Rabbits found infected with <i>B. pestis</i>	0

VENTURA COUNTY, CAL.

No record of human or rodent plague in Ventura County.

Week ended November 20.

Ranches inspected.....	9
Ground squirrels shot.....	44
Ground squirrels examined bacteriologically.....	40
Ground squirrels found infected with <i>B. pestis</i>	0

Smallpox in the United States.

[This table includes cases and deaths reported to the Surgeon-General of the Public Health and Marine-Hospital Service from June 26 to December 10, 1909. For reports received from December 25, 1908, to June 25, 1909, see Public Health Reports for June 25, 1909. In accordance with custom the tables of epidemic diseases are terminated semiannually and new tables begun.]

Place.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Birmingham.....	Nov. 14-20.....	1	.....
Mobile.....	Oct. 17-23.....	1	.....
Montgomery.....	Nov. 14-20.....	12	.....
Total for State.....		14	.....
California, general.....	Aug. 1-31.....	.....	2	
Berkeley.....	July 25-31.....	1	.....
Hobart Mills.....	Apr. 1-30.....	1	.....
Sacramento.....	June 6-Oct. 23.....	2	.....
San Francisco.....	June 6-Nov 13.....	3	.....
Truckee.....	Mar. 23.....	3	.....
Total for State.....		10	2	

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Colorado:				
Adams County.....	Apr. 1-June 30....	5	.....
Boulder County.....	Apr. 1-June 30....	8	.....
Clear Creek County.....	Apr. 1-June 30....	1	.....
Denver County—				
Denver.....	Apr. 1-June 30....	10	.....
El Paso County.....	Apr. 1-June 30....	3	.....
Fremont County.....	Apr. 1-June 30....	13	.....
Grand County.....	Apr. 1-June 30....	1	.....
Huerfano County.....	Apr. 1-June 30....	24	.....
Larimer County.....	Apr. 1-June 30....	4	.....
Las Animas County.....	Apr. 1-June 30....	1	.....
Mesa County.....	Apr. 1-June 30....	20	.....
Montrose County.....	Apr. 1-June 30....	2	.....
Morgan County.....	Apr. 1-June 30....	17	.....
Otero County.....	Apr. 1-June 30....	1	.....
Pueblo County.....	Apr. 1-June 30....	8	.....
Rio Grande County.....	Apr. 1-June 30....	1	.....
San Miguel County.....	Apr. 1-June 30....	4	.....
Weld County.....	Apr. 1-June 30....	1	.....
Total for State.....		124		
Connecticut:				
Bridgeport.....	Oct. 2.....	1	.....
New Haven.....	May 1-31.....	1	.....
Total for State.....		2		
District of Columbia:				
Washington.....	Aug. 8-Nov. 20....	10	.....
Total for District.....		10		
Florida:				
Jacksonville.....	Nov. 14-20.....	1	.....
Total for State.....		1		
Georgia:				
Macon.....	June 14-Nov. 28...	30	.....
Total for State.....		30		
Illinois:				
Alexander County—				
Calro.....	May 1-June 30....	25	.....
Bureau County.....	Aug. 1-31.....	1	.....
Champaign County.....	Apr. 1-May 31.....	25	.....
Christian County.....	Apr. 1-May 31.....	35	.....
Clay County.....	Apr. 1-30.....	1	.....
Clinton County.....	Apr. 1-June 30....	7	.....
Cook County—				
Chicago.....	June 20-Nov. 13...	10	.....
Dewitt County.....	May 1-31.....	7	.....
Edwards County.....	Apr. 1-May 31.....	3	.....
Efingham County.....	Apr. 1-30.....	2	.....
Fayette County.....	May 1-31.....	2	.....
Franklin County.....	Apr. 1-May 31.....	2	.....
Fulton County.....	Apr. 1-June 30....	.....	.....
Gallatin County.....	Apr. 1-May 31.....	16	.....
Iroquois County.....	May 1-31.....	1	.....
Jackson County.....	Apr. 1-May 31.....	14	.....
Murphysboro.....	Apr. 1-May 31.....	40	.....
Knox County.....	Apr. 1-30.....	8	.....
Lake County.....	Apr. 1-July 31.....	14	.....
LaSalle County.....	Apr. 1-30.....	3	.....
McDonough County.....	Apr. 1-30.....	25	.....
Hellenny County—				
Marengo.....	May 1-June 30....	97	.....
Macoupin County.....	Apr. 1-May 31.....	6	.....
McLean County.....	June 1-30.....	1	.....
Madison County.....	May 1-June 30....	2	.....
Marion County.....	Apr. 1-June 30....	14	.....
Menard County.....	Aug. 1-31.....	5	.....
Massac County—				
Metropolis.....	Apr. 1-May 31.....	29	.....
Montgomery County.....	May 1-June 30....	2	.....
Peoria County.....	Apr. 1-June 30....	13	.....
Peoria.....	June 1-Sept. 31...	54	.....
Perry County.....	Apr. 1-Aug. 31....	18	.....
Pulaski County.....	May 1-31.....	5	.....

Present.

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Illinois—Continued.				
Rock Island County—				
Moline.....	June 1-July 31....	2		
St. Clair County—				
East St. Louis.....	May 1-June 30....	11		
Saline County.....	May 1-31.....	30		
Sangamon County.....	Apr. 1-30.....	1		
Springfield.....	May 29-July 9.....	3		
Schuyler County.....	May 1-31.....	1		
Shelby County.....	Apr. 1-July 31.....	3		
Stephenson County.....	May 1-31.....	4		
Tazewell County.....	May 1-31.....	5		
Pekin.....	Apr. 1-Aug. 31.....	78		
Union County.....	Apr. 1-May 31.....	5		
Vermilion County.....	Apr. 1-May 31.....	2		
Danville.....	June 14-Nov. 6.....	15		
Warren County.....	June 1-July 31.....	3		
Will County—				
Joliet.....	July 1-31.....	1		
Williamson County.....	Apr. 1-Aug. 31.....	17		
Winnabago County.....	June 1-30.....	1		
Woodford County.....	Apr. 1-July 31.....	25		
Total for State.....		694		
Indiana:				
Allen County.....	May 1-Aug. 31.....	17		
Fort Wayne.....	June 6-Nov. 13....	194		
Carroll County.....	June 1-30.....	1		
Clay County.....	June 1-30.....	4		
Dearborn County.....	May 1-31.....	4		
DeKalb County.....	June 1-30.....	1		
Delaware County.....	May 1-31.....	1		
Muncie.....	June 29-Nov. 20....	15		
Fayette County.....	June 1-30.....	1		
Fountain County.....	July 1-31.....	1	1	
Gibson County.....	May 1-31.....	5		
Grant County.....	May 1-July 31.....	4		
Greene County.....	June 1-July 31.....	4	1	
Marion County—				
Indianapolis.....	June 14-Oct. 24....	3		
Montgomery County.....	May 1-June 30.....	9		
Parke County.....	May 1-31.....	1		
Pulaski County.....	May 1-31.....	2		
St. Joseph County.....	June 1-30.....	4		
South Bend.....	June 13-Aug. 14....	5		
Tipton County.....	July 1-31.....	1		
Vanderburg County.....	May 1-June 30.....	26		
Vermillion County.....	May 1-July 31.....	43		
Vigo County.....	June 1-30.....	4		
Wayne County.....	May 1-July 31.....	15	1	
White County.....	May 1-31.....	2		
Total for State.....		367	3	
Iowa:				
Cedar Rapids.....	July 1-Aug. 31.....	2		
Keokuk.....	May 1-31.....	3		
Ottumwa.....	June 1-30.....	1		
Total for State.....		6		
Kansas:				
Allen County.....	May 1-31.....	5		
Atchison County.....	June 1-July 31.....	8		
Brown County.....	June 1-30.....	1		
Chatauqua County.....	May 1-31.....	3		
Cherokee County.....	May 1-31.....	1		
Colley County.....	May 1-31.....	1		
Comanche County.....	June 1-30.....	3		
Cowley County.....	May 1-31.....	14		
Crawford County.....	May 1-31.....	20		
Pittsburg.....	May 1-June 30.....	4		
Decatur County.....	June 1-30.....	12	1	
Dickinson County.....	May 1-July 31.....	3		
Doniphan County.....	May 1-Aug. 31.....	29		
Douglas County.....	May 1-31.....	1		
Elk County.....	May 1-31.....	1		
Ellsworth County.....	June 1-30.....	1		
Franklin County.....	May 1-31.....	5		
Geary County.....	May 1-July 31.....	5		
Graham County.....	June 1-30.....	6		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Kansas—Continued.				
Greenwood County.....	May 1-31.....	3		
Jackson County.....	May 1-June 30....	24		
Jefferson County.....	May 1-31.....	2		
Jewell County.....	May 1-31.....	6		
Kearny County.....	May 1-31.....	1		
Kingman County.....	July 1-31.....	2		
Labette County—				
Parsons.....	May 1-Sept. 30....	11		
Lincoln County.....	July 1-31.....	4		
Lyon County.....	May 1-July 31....	28		
McPherson County.....	July 1-31.....	1		
Marion County.....	July 1-31.....	1		
Marshall County.....	May 1-Aug. 31....	230		
Montgomery County.....	May 1-July 31....	10		
Coffeeville.....	July 1-31.....	1		
Nemaha County.....	June 1-July 31....	11		
Osage County.....	May 1-June 30....	32		
Osborne County.....	May 1-June 30....	11		
Ottawa County.....	May 1-31.....	3		
Phillips County.....	May 1-31.....	1		
Pottawatomie County.....	May 1-July 31....	15		
Pratt County.....	May 1-July 31....	6		
Rawlins County.....	May 1-31.....	13		
Republic County.....	June 1-30.....	5		
Riley County.....	May 1-June 30....	8		
Rooks County.....	July 1-31.....	1		
Rush County.....	June 1-30.....	2		
Russell County.....	June 1-30.....	1		
Saline County.....	May 1-31.....	2		
Scott County.....	Aug. 1-Sept. 30....	2		
Sedgewick County.....	May 1-31.....	11		
Wichita.....	July 11-Aug. 7....	5		
Shawnee County.....	May 1-Aug. 31....	13		
Topeka.....	May 1-Sept. 30....	47		
Smith County.....	May 1-31.....	11		
Sumner County.....	May 1-31.....	3		
Thomas County.....	May 1-31.....	1		
Wabaunsee County.....	May 1-31.....	6		
Wyandotte County.....	May 1-31.....	4		
Kansas City.....	June 13-Nov. 20..	15		
Total for State.....		676	1	
Kentucky:				
Covington.....	June 13-July 3....	5		
Lexington.....	June 29-Oct. 30....	17		
Newport.....	June 14-July 25....	4		
Paducah.....	June 13-26.....	3		
Total for State.....		29		
Louisiana:				
New Orleans.....	June 13-Oct. 30....	14		
Total for State.....		14		
Maryland, general.....				
Mar. 1-Apr. 30.....		9		
Total for State.....		9		
Massachusetts:				
Boston.....	Sept. 12-Nov. 13..	4	1	
Lawrence.....	June 27-July 3....	1		
Total for State.....		5	1	
Michigan:				
Bay County—				
Bay City.....	June 1-Sept. 30....	4		
Berrien County.....	July 1-Aug. 31....	9		
Branch County.....	July 1-Sept. 30....	7		
Calhoun County.....	June 1-30.....	1		
Battle Creek.....	Nov. 6-13.....	1		
Cass County.....	July 1-Aug. 31....	8	1	
Cheboygan County.....	July 1-31.....	2		
Chippewa County.....	May 1-31.....	1		
Clinton County.....	Aug. 1-31.....	1		
Delta County.....	June 1-30.....	1		
Eaton County.....	May 1-Sept. 30....	49		
Emmet County.....	June 1-July 31....	2		
Genesee County.....	July 1-31.....	1		
Gogebic County.....	Aug. 1-31.....	1		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Michigan—Continued.				
Houghton County.....	May 1-Sept. 30....	8		
Huron County.....	June 1-30.....	1		
Ingham County.....	May 1-31.....	1		
Jackson County.....	May 1-31.....	1		
Kalamazoo County—				
Kalamazoo.....	July 4-24.....	2		
Kent County—				
Grand Rapids.....	June 6-26.....	2		
Lapeer County.....	June 1-30.....	1		
Livingston County.....	Aug. 1-Sept. 30....	27		
Marquette County.....	May 1-Sept. 30....	9		
Menominee County.....	July 1-31.....	4		
Muskegon County.....	May 1-Sept. 30....	18		
Newaygo County.....	June 1-30.....	1		
Oceana County.....	May 1-31.....	1		
Ottawa County.....	May 1-July 31....	8		
Saginaw County.....	May 1-July 31....	20		
Saginaw.....	July 25-Oct. 16....	4		
St. Clair County.....	May 1-June 30....	4		
Schoolcraft County.....	July 1-31.....	4		
Manistique.....	June 1-Aug. 31....	41		
Tuscola County.....	May 1-31.....	4		
Wayne County—				
Detroit.....	May 1-July 31....	2		
Total for State.....		251	1	
Minnesota, general.				
Becker County.....	June 15-21.....	5		
Bigstone County.....	June 8-14.....	1		
Carver County.....	July 6-Aug. 16....	6		
Clay County.....	July 28-Aug. 2....	1		
Cottonwood County.....	July 1-31.....	1		
Crawford County.....	Aug. 10-16.....	1		
Fairbault County.....	June 7-14.....	2		
Hennepin County—				
Minneapolis.....	May 1-June 30....	39		
Hubbard County.....	May 25-31.....	1		
Itasca County.....	May 25-June 14....	7		
Lesueur County.....	June 1-7.....	1		
McLeod County.....	May 25-July 19....	2		
Marshall County.....	June 8-July 5....	6		
Meeker County.....	May 25-31.....	5		
Morrison County.....	June 21-Aug. 16....	2		
Nobles County.....	May 25-June 21....	2		
Olmsted County.....	June 8-14.....	2		
Pine County.....	May 25-31.....	1		
Ramsey County—				
St. Paul.....	Apr. 1-May 31....	10		
Redwood County.....	June 1-7.....	1		
Rock County.....	June 1-7.....	1		
St. Louis County.....	May 25-June 21....	3		
Duluth.....	June 10-Nov. 6....	22		
Sibley County.....	June 22-July 19....	4		
Stearns County—				
St. Cloud.....	July 13-19.....	1		
Steele County.....	May 25-June 21....	3		
Swift County.....	July 20-26.....	1		
Wabasha County.....	May 25-31.....	2		
Wadena County.....	May 25-July 19....	11		
Waseca County.....	May 25-31.....	8		
Wright County.....	June 15-Aug. 16....	10		
Total for State.....		162	3	
Mississippi:				
Holly Springs.....	Nov. 1-6.....	3		
Total for State.....		3		
Missouri:				
Kansas City.....	June 13-26.....	2		
St. Joseph.....	May 30-July 24....	19		
St. Louis.....	June 20-Nov. 13....	10		
Total for State.....		31		
Montana:				
Carbon County.....	June 1-July 31....	6		
Cascade County—				
Great Falls.....	June 1-30.....	1		
Chouteau County.....	June 1-30.....	1		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Montana—Continued.				
Custer County.....	June 1-30.....	1		
Dawson County.....	May 1-Sept. 30.....	7		
Deerlodge County.....	May 1-31.....	1		
Fergus County.....	June 1-30.....	1		
Flathead County.....	May 1-31.....	4		
Gallatin County.....	May 1-31.....	4		
Jefferson County.....	May 1-31.....	2		
Lewis and Clark County— Helena.....	May 1-31.....	1		
Missoula County— Missoula.....	June 1-Aug. 31.....	6		
Park County.....	May 1-June 30.....	21		
Livingston.....	May 1-Aug. 31.....	14		
Sanders County.....	May 1-31.....	1		
Silverbow County.....	June 1-Sept. 30.....	25		
Butte.....	June 11-Nov. 11.....	62		
Teton County.....	May 1-31.....	1		
Valley County.....	May 1-31.....	1		
Yellowstone County.....	May 1-July 31.....	7		
Total for State.....		167		
Nebraska:				
Lincoln.....	May 1-July 31.....	34		
Total for State.....		34		
New Jersey:				
Newark.....	Sept. 19-25.....	1		
Total for State.....		1		
New York, general.....				
Buffalo.....	May 1-Aug. 31.....	462		
	Oct. 3-Nov. 13.....	4		
Total for State.....		466		
North Carolina:				
Beaufort County.....	June 1-30.....	1		
Bladen County.....	Apr. 1-30.....	5		
Buncombe County.....	Apr. 1-30.....	1		
Caldwell County.....	Apr. 1-June 30.....	19		
Camden County.....	Apr. 1-June 30.....	70		
Carteret County.....	Apr. 1-30.....	1		
Craven County.....	Apr. 1-Aug. 31.....	10		
Cumberland County.....	May 1-Aug. 31.....	2		
Davie County.....	Aug. 1-31.....	1		
Duplin County.....	Apr. 1-Aug. 31.....	35		
Harnett County.....	June 1-July 31.....	7		
Johnston County.....	Apr. 1-July 31.....	3		
Jones County.....	Aug. 1-31.....	8		
Lee County.....	Apr. 1-30.....	6		
Lenoir County.....	July 1-Aug. 31.....	6		
Madison County.....	May 1-June 30.....	7		
Mecklenburg County.....	May 1-31.....	2		
Charlotte.....	Sept. 26-Nov. 20.....	17		
Mitchell County.....	July 1-31.....	8		
Montgomery County.....	July 1-31.....	10		
Nash County.....	June 1-30.....	1		
Onslow County.....	Apr. 1-30.....	2		
Pamlico County.....	May 1-31.....	4		
Pasquotank County.....	Apr. 1-May 31.....	15		
Pitt County.....	Apr. 1-June 30.....	17		
Robeson County.....	June 1-July 31.....	14		
Rowan County.....	May 1-July 31.....	17		
Sampson County.....	Apr. 1-June 30.....	51		
Sylvania County.....	May 1-31.....	5		
Wake County.....	Apr. 1-Aug. 31.....	3		
Watauga County.....	June 1-Aug. 31.....	38		
Wayne County.....	May 1-31.....	14		
Wilson County.....	Apr. 1-30.....	1		
Yancey County.....	Apr. 1-Aug. 31.....	10		
Total for State.....		411		
North Dakota:				
Bottineau County.....	May 1-July 31.....	2		
Cass County.....	July 1-31.....	2		
Emmons County.....	July 1-31.....	3		
Grand Forks County.....	May 1-July 31.....	13		
Henry County.....	Aug. 1-31.....	5		
Lamoure County.....	May 1-June 30.....	3		

Apr. 1-30, present.

In extreme northern part

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
North Dakota—Continued.				
McHenry County.....	May 1-31.....	1		
Stutsman County.....	June 1-July 31....	15		
Walsh County.....	June 1-30.....	2		
Ward County.....	May 1-July 31....	11		
Total for State.....		57		
Ohio:				
Cincinnati.....	June 12-Oct. 9....	5		
Columbus.....	Sept. 12-18.....	1		
Dayton.....	July 18-Oct. 23....	21	1	
Springfield.....	Oct. 10-30.....	15		
Toledo.....	July 25-Aug. 7....	2		
Total for State.....		44	1	
Oklahoma:				
Coal County.....	Aug. 1-31.....	3		
Ellis County.....	Aug. 1-31.....	1		
Kay County.....	Aug. 1-31.....	5		
Kiowa County.....	Aug. 1-31.....	4		
Muskogee County.....	Aug. 1-31.....	1		
Oklahoma County— Oklahoma.....	Apr. 3-Aug. 21....	51	1	
Washington County.....	Aug. 1-31.....	1		
Total for State.....		66	1	
Oregon:				
Cass County.....	July 1-31.....	8		
Clackamas County.....	May 1-June 30....	3		
Coos County.....	June 1-30.....	1		
Lane County.....	July 1-31.....	1		
Linn County.....	July 1-31.....	2		
Marion County.....	May 1-Aug. 31....	14		
Multnomah County.....	May 1-June 30....	3		
Portland.....	Apr. 1-Sept. 30....	48		
Tillamook County.....	July 1-31.....	1		
Umatilla County.....	June 1-30.....	2		
Union County.....	June 1-30.....	1		
Washington County.....	May 1-June 30....	14		
Yamhill County.....	June 1-Aug. 31....	4		
Total for State.....		102		
Pennsylvania:				
Philadelphia.....	July 10-24.....	4		
Total for State.....		4		
Tennessee:				
Knoxville.....	June 20-Aug. 21....	7		
Memphis.....	Nov. 1-6.....	3		
Total for State.....		10		
Texas:				
Anderson County.....	Aug. 1-31.....	5		
Archer County.....	June 1-30.....	1		
Baylor County.....	June 1-30.....	22		
Bee County.....	June 1-30.....	6		
Bexar County.....	June 1-July 31....	1	1	
San Antonio.....	June 13-Oct. 2....	14		
Bowie County.....	June 1-30.....	7		
Cameron County.....	June 1-30.....	1		
Cherokee County.....	June 1-30.....	1		
Childress County.....	June 1-30.....	4		
Concho County.....	Aug. 1-31.....	2		
Ellis County.....	May 1-June 30....	2		
Galveston County.....	June 1-30.....	1		
Galveston.....	June 19-25.....	1		
Gonzales County.....	May 1-June 30....	6	2	
Grayson County.....	June 1-30.....	9		
Harris County.....	June 1-30.....	12		
Houston.....	Mar. 28-June 19....	17		
Harrison County.....	June 1-Aug. 31....	17		
Hays County.....	July 1-31.....	8		
Henderson County.....	June 1-July 31....	30		
Jefferson County.....	May 1-June 30....	3		
Jones County.....	June 1-30.....	2		
Kinney County.....	June 1-30.....	1	1	
Lamar County.....	June 1-Aug. 31....	27		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Texas—Continued.				
Matagorda County.....	May 1-Aug. 31....	11		
McLennan County.....	June 1-30.....	19		
Milam County.....	June 1-30.....	5		
Runnels County.....	May 1-July 31....	26		
San Saba County.....	Apr. 9-June 30....	11		
Smith County.....	June 1-30.....	10		
Stephens County.....	June 1-30.....	33	1	
Tarrant County.....	May 1-June 30....	19	3	
Fort Worth.....	June 1-July 31....	5		
Travis County.....	May 1-June 30....	19		
Upshur County.....	May 1-Aug. 31....	52		
Van Zandt County.....	May 1-June 30....	6		
Victoria County.....	Aug. 1-31.....	6		
Webb County—				
Laredo.....	June 19.....	1		
Wharton County.....	June 1-30.....	2		
Wichita County.....	June 1-30.....	5		
Williamson County.....	June 1-Aug. 31....	12	1	
Total for State.....		442	9	
Utah:				
Boxelder County.....	May 1-Oct. 31....	8		
Cache County.....	June 1-July 31....	4		
Carbon County.....	June 1-July 31....	3		
Davis County.....	May 1-July 31....	30		
Emery County.....	June 1-July 31....	4		
Garfield County.....	May 1-Aug. 31....	20		
Juab County.....	Aug. 1-Oct. 31....	13		
Rich County.....	Oct. 1-31.....	4		
Salt Lake County.....	May 1-Oct. 31....	65	1	
Salt Lake City.....	June 1-Sept. 30....	108		
Sanpete County.....	May 1-Sept. 30....	32		
Summit County.....	May 1-Aug. 31....	78		
Tooele County.....	May 1-31.....	5		
Uintah County.....	May 1-Oct. 31....	61		
Utah County.....	May 1-Oct. 31....	101	1	
Wasatch County.....	Aug. 1-Oct. 31....	55		
Weber County.....	May 1-Oct. 31....	11		
Total for State.....		602	2	
Virginia:				
Lynchburg.....	June 20-26.....	1		
Total for State.....		1		
Washington:				
Bellingham.....	Oct. 24-30.....	2		
Seattle.....	July 1-Nov. 13....	9		
Spokane.....	June 6-Nov. 13....	8		
Tacoma.....	May 14-June 27....	6		
Total for State.....		25		
West Virginia:				
Wheeling.....	Oct. 17-23.....	1		
Total for State.....		1		
Wisconsin:				
Ashland County.....	Jan 1-Mar. 31....	8		
Barron County.....	Jan. 1-June 30....	93		
Brown County.....	Apr. 1-June 30....	18		
Buffalo County.....	Jan. 1-Mar. 31....	5		
Burnett County.....	Jan. 1-Mar. 31....	11		
Calumet County.....	Jan. 1-June 30....	2		
Chippewa County.....	Jan. 1-June 30....	97	1	
Clark County.....	Jan. 1-June 30....	20		
Columbia County.....	Jan. 1-Mar. 31....	1		
Dane County.....	Apr. 1-June 30....	6		
Douglas County.....	Jan. 1-June 30....	11		
Dunn County.....	Jan. 1-June 30....	39	2	
Fond du Lac County.....	Jan. 1-June 30....	3		
Jackson County.....	Jan. 1-Mar. 31....	1		
Juneau County.....	Jan. 1-June 30....	42		
La Crosse County.....	Apr. 1-June 30....	10		
La Crosse.....	June 13-Nov. 20....	5		
Manitowish County.....	Jan. 1-June 30....	41		
Marathon County.....	Jan. 1-June 30....	2		
Marinette County—				
Marinette.....	Nov. 13-20.....	1		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Wisconsin—Continued.				
Milwaukee County.....	Apr. 1-June 30....	24		
Milwaukee.....	June 2-Nov. 6....	9		
Oconto County.....	Jan. 1-June 30....	25	1	
Oneida County.....	Apr. 1-June 30....	1		
Outagamie County—				
Appleton.....	June 20-July 31...	22		
Ozaukee County.....	Jan. 1-Mar. 31....	13		
Pepin County.....	Jan. 1-Mar. 31....	2		
Pierce County.....	Jan. 1-Mar. 31....	4		
Polk County.....	Jan. 1-June 30....	19		
St. Croix County.....	Jan. 1-June 30....	65		
Sheboygan County.....	Jan. 1-June 30....	46		
Taylor County.....	Jan. 1-Mar. 31....	5		
Trempealeau County.....	Jan. 1-Mar. 31....	3		
Vernon County.....	Jan. 1-Mar. 31....	51		
Walworth County.....	Apr. 1-June 30....	1		
Washburn County.....	Jan. 1-June 30....	14		
Waukesha County.....	Jan. 1-Mar. 31....	5		
Waupaca County.....	Jan. 1-June 30....	27		
Waushara County.....	Jan. 1-Mar. 31....	1		
Winnebago County.....	Jan. 1-June 30....	17		
Wood County.....	Apr. 1-June 30....	2		
Total for State.....		772	4	
Grand total for the United States.....		5,643	28	

Plague in the United States.

[August 2-December 10, 1909.]

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
Alameda County—				
Oakland.....	Oct. 26.....	1		
Sunol.....	Aug. 2-12.....	1	1	Case sickened July 27.
	Sept. 24.....	1		In vicinity of Sunol.

MORBIDITY AND MORTALITY.

Weekly morbidity and mortality table, cities of the United States.

[For smallpox and plague, see special tables.]

Cities.	Week ended—	Popula- tion, United States census, 1900.	Total deaths from all causes.	Tuber- culosis.		Enteric fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Altoona, Pa.	Nov. 27	38,973	6	1	1	1	1	1	1						
Ann Arbor, Mich.	Nov. 20	14,509	6	1	1	2	2								
Auburn, N. Y.	Oct. 16	30,345	8	1	1	1	1								
Do.	Oct. 23		12	1	1	1	1								
Do.	Oct. 30		14	1	1	3	3								
Do.	Nov. 6		9	1	2	3	3								
Do.	Nov. 13		9	1	1	2	2	1	1			1			
Do.	Nov. 20		10	4	1	1	1								
Baltimore, Md.	Nov. 27	508,957	179	6	23	9	2	3	0	22	2	6		8	2
Bayonne, N. J.	do.	32,722				1	1	2		1					
Beaver Falls, Pa.	do.	13,000	0			1						5			
Berkeley, Cal.	Nov. 13	13,214	7			1	1					1		2	
Binghamton, N. Y.	Nov. 20	38,647	15		2	1	2			4	1	4			
Birmingham, Ala.	do.	38,415	35	3	4	7	3	6	6	6		4			
Braddock, Pa.	do.	15,654	7			1		6	1	4		5			
Bridgeport, Conn.	do.	70,996	24	1	1			8		4	2				
Camden, N. J.	Nov. 27	75,945	25	1	5					8					
Camden, S. C.	do.	2,441	0			1						1			
Canton, Ohio	Nov. 27	30,667	4												
Chelsea, Mass.	Nov. 27	34,072	16		2	1	1			1					
Chicago, Ill.	do.	1,695,575	586	83	75	28	3	134	7	171	10	106		34	2
Chicopee, Mass.	do.	19,167	5		2					2	1				
Cleveland, Ohio	Nov. 26	381,768		17	12	3	1	14	1	38	4	41	1		
Clinton, Mass.	Nov. 27	13,667	5			1									
Columbus, Ga.	Nov. 20	17,614	7												
Do.	Nov. 27		1												
Columbus, Ohio	Nov. 20	125,560	38	3	3	3		9		4		24		1	
Concord, N. H.	do.	19,632	5	1	1	1				8	1				
Covington, Ky.	Nov. 27	42,938	14		6	1									
Detroit, Mich.	Nov. 20	285,704	118					35	3	28	2				
Do.	Nov. 27		143					32	1	49	3				
Duluth, Minn.	Nov. 20	80,000	22	1	1			5		8		1			
Elkhart, Ind.	Nov. 22	15,184	6	1	1										
Elmira, N. Y.	Nov. 20	35,672	11		1	2		1		1					
El Paso, Tex.	Nov. 24	15,905	32	5	10	32				1					
Evansville, Ind.	Nov. 27	59,007	17			2		8		5	1				
Erie, Pa.	Nov. 20	52,733	11	4		1	1	2		5		1		2	
Galesburg, Ill.	do.	18,607	6												
Galveston, Tex.	do.	37,789	2	1	1	3	1			3					
Gloucester, Mass.	Nov. 27	26,121	5												
Grand Rapids, Mich.	Nov. 20	87,565	27		1	3		17	1	3					
Hartford, Conn.	Nov. 21	79,850	25	6	3	1		5		7					
Haverhill, Mass.	Nov. 27	37,175	8	2	1	1		4		4		2			
Hyde Park, Mass.	do.	13,244	3		1			1				1			
Indianapolis, Ind.	Nov. 20	169,164	71	7	12	9		5	1	31	2	74			
Jacksonville, Fla.	do.	28,429	19		1	1	2			3					
Jersey City, N. J.	Nov. 21	206,433	71	3	4			15	1	15	1	5			
Joplin, Mo.	Nov. 20		17		3		1								
Kansas City, Kans.	do.	51,418	28		5	9		4		18	1				
Do.	Nov. 27		15			7	1	11	1	13	2				
Kearney, N. J.	Nov. 20	10,896	4					1		1					
Do.	Nov. 27		3					1	3	4		1			
La Crosse, Wis.	do.	28,895	5												
La Fayette, Ind.	Nov. 20	18,116	5		1	1						1			
Lancaster, Pa.	Nov. 27	41,459	9	1		3		6				5			
Lawrence, Mass.	Nov. 20	62,559	12	4		4		2		4		5			
Lebanon, Pa.	Nov. 27	17,628	7	1		3									
Lexington, Ky.	do.	26,369	6		1			1		3	1				
Lowell, Mass.	do.	94,969	37	3	3	1		1		7		9			
Lynchburg, Va.	do.	18,891												1	
Lynn, Mass.	Nov. 20	68,513	25		2	2		3		8					
Macon, Ga.	Nov. 21	22,746	15	4	4			1							
Malden, Mass.	Nov. 13	33,664	10	1		3		2		1					
Do.	Nov. 20		11	1	2			6		6					
Manchester, N. H.	do.	56,987	19	1	1			1		11		52			
Manchester, Va.	Nov. 6		3												
Do.	Nov. 13		5		2		1			2					
Do.	Nov. 20		4												
Mansfield, Ohio	Nov. 27	17,650	0												
Marquette, Wis.	do.	16,195	2					3		2					

Weekly morbidity and mortality table, cities of the United States—Continued.

Cities.	Week ended—	Population, United States census, 1900.	Total deaths from all causes.	Tuberculosis.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Marion, Ind.	Nov. 27	17,337	3												
Marlboro, Mass.	Nov. 20	13,009	4		1										
Medford, Mass.	Nov. 27	18,244	2									1			
Melrose, Mass.	Nov. 20	12,962	5	1											
Milwaukee, Wis.	do.	285,315	76	15	4	17		53		19	16			1	
Mobile, Ala.	do.	38,469	24		3									8	
Moline, Ill.	do.	17,248	10												
Montclair, N. J.	do.	13,962	2			1		1				1			
Montgomery, Ala.	do.	30,346	15	1	1	1				3					
Do.	Nov. 27		16	13						1					
Morristown, N. J.	do.	13,000	4												
Mount Vernon, N. Y.	Nov. 27	21,228	4			1				1				1	
Nantitoke, Pa.	Nov. 28	12,616	3	1				1				1			
Nashville, Tenn.	Nov. 27	80,865	32	1	2	1	2	3		5					
Nebraska City, Nebr.	Nov. 20	7,200								1				2	
New Bedford, Mass.	Nov. 27	63,442	31	1	2	3		6		3		7			
Newburyport, Mass.	do.	14,478	7			1				2					
New Orleans, La.	Nov. 20	278,104	134	31	15	12		6		8		1		1	
New York, N. Y.	Nov. 27	457,202	1,336	457	134	51	12	262	9	381	29	245	7	22	7
Norristown, Pa.	do.	22,265	9	2				9		381	29	245	7		
Northampton, Mass.	do.	18,643	5												
North Adams, Mass.	do.	24,290	6	1	2			1							
Orange, N. J.	do.	24,141	6	1	1			2		1		1			
Palmer, Mass.	do.	7,801	7			2						1	1		
Portsmouth, Va.	Nov. 23	17,427	8		1			1	5	2					
Pittsburg, Pa.	Nov. 20	321,616	146	41	7	10		40	3	21	3	34	1	11	
Pittsfield, Mass.	Nov. 27	27,766	4							1					
Pittsford, Pa.	do.	13,696	3			2				2					
Providence, R. I.	do.		62	4	6	1	1	11		13	2	14	1		
Racine, Wis.	Nov. 20	29,102	7					1		2					
Do.	Nov. 27		9		2										
Reading, Pa.	Nov. 29	78,961	20	1		6	1	4		5		7			
Richmond, Va.	Nov. 20	85,050	38	2	6	11		2		5				4	2
Rock Island, Ill.	do.	19,493	6												
Sacramento, Cal.	Nov. 13	29,283	13					3		1		3			
Do.	Nov. 20		17		2			2		2		5			
St. Louis, Mo.	do.	575,238	168	38	21	13	4	24	2	36	3	6		17	3
San Antonio, Tex.	do.	53,531	0			4									
Saratoga Spgs., N. Y.	do.		1												
Schenectady, N. Y.	do.	31,682	11	4	1	2	1	3		3		13		1	
Somerville, Mass.	Nov. 27	61,643	20	1	1	2	1	3		7					
South Bend, Ind.	Nov. 20	35,999	13			1									
South Bethlehem, Pa.	Nov. 27	13,241	6	2	1			3		7					
Spokane, Wash.	Nov. 13	38,848	24	6	1	9		6	1	7					
Springfield, Mass.	Nov. 20	62,059	29	3				2		12		1			
Springfield, Ohio.	do.	38,253	9			1		3		3		1			
Steelton, Pa.	Nov. 27	12,068	5		2		1	1		3		26			
Superior, Wis.	Nov. 20	31,091	6					4							
Taunton, Mass.	Nov. 27	31,036	12	1	2					1					
Terre Haute, Ind.	Nov. 20	36,673	11		4	1		2		1		2			
Titusville, Pa.	Nov. 27	8,244	3							1					
Trenton, N. J.	do.	73,307	3	3	2	3		7		5					
Waltham, Mass.	do.	23,481	5												
Washington, D. C.	Nov. 20	278,718	94	36	15	16	3	17		39	2			7	
Weymouth, Mass.	Nov. 27	11,324	5												
Wheeling, W. Va.	Nov. 20	38,878	8	2	1	1		1		7	1	1			
Wichita, Kans.	do.	24,671	21			3	2			1	1	2			
Wilkes-Barre, Pa.	Nov. 19	51,721	19			6		3	2	3				1	
Wilkesburg, Pa.	Nov. 21	13,000	8	10		1				2	1				
Do.	Nov. 28		3		1	2		1		1					
Williamsport, Pa.	Nov. 20	28,757	9	1		1		5		1					
Wilmington, Del.	Nov. 27	76,508	20		3										
Winona, Minn.	Nov. 20	19,714	4												
Woburn, Mass.	Nov. 27	14,254	5		1										
Worcester, Mass.	Nov. 20	118,421	43	3	3			3		14		1		1	1
York, Pa.	Nov. 20	33,708	1			1		1		4		13			

STATISTICAL REPORTS OF MORBIDITY AND MORTALITY, STATES AND CITIES OF THE UNITED STATES—UNTABULATED.

CALIFORNIA.—Month of September, 1909. Total number of deaths, 2,353, including enteric fever 58, measles 5, scarlet fever 6, whooping cough 24, tuberculosis 327.

San Francisco.—Month of September, 1909. Total number of deaths, 424, including tuberculosis 42, enteric fever 5, diphtheria 1, scarlet fever 4, whooping cough 2. Cases: Diphtheria 30, scarlet fever 47, smallpox 0, measles 15, whooping cough 15, tuberculosis 26, enteric fever 26.

Stockton.—Month of October, 1909. Total number of deaths, 32.

INDIANA.—Marion.—Month of October, 1909. Total number of deaths, 23, including diphtheria 1, enteric fever 3, tuberculosis 1. Cases: Scarlet fever 4, diphtheria 6, enteric fever 13.

IOWA.—Keokuk.—Month of October, 1909. Total number of deaths 17, including typhoid fever 1.

MARYLAND.—Baltimore.—Month of October, 1909. Total number of deaths 835, including enteric fever 23, measles 2, scarlet fever 3, whooping cough 10, diphtheria 4, tuberculosis 120.

MISSOURI.—St. Louis.—Month of September, 1909. Total number of deaths from all cases 802, including scarlet fever 4, diphtheria 5, whooping cough 2, enteric fever 27.

MONTANA.—Helena.—Month of September, 1909. Total number of deaths 361, including tuberculosis 24, diphtheria 6, scarlet fever 2, measles 1, enteric fever 21, whooping cough 4.

NEW YORK.—Month of September, 1909. Total number of deaths 11,050, including enteric fever 183, measles 30, scarlet fever 48, whooping cough 85, diphtheria 98, tuberculosis 1,122.

NORTH DAKOTA.—Month of September, 1909. Total number of deaths 228, including tuberculosis 2, enteric fever 13, diphtheria 2, scarlet fever 2. Cases: Tuberculosis 15, smallpox 2, enteric fever 65, diphtheria 36, scarlet fever 25, whooping cough 13.

OHIO.—Toledo.—Month of October, 1909. Total number of deaths 181, including enteric fever 3, diphtheria 6, tuberculosis 18.

VIRGINIA.—Richmond.—Month of October, 1909. Total number of deaths 204, including enteric fever 6, diphtheria 3, tuberculosis 19.

WASHINGTON.—Spokane.—Month of October, 1909. Total number of deaths 104, including scarlet fever 1, diphtheria 2, enteric fever 8, tuberculosis 8. Cases: Measles 10, scarlet fever 50, diphtheria 11, typhoid fever 59.

WISCONSIN.—Milwaukee.—Month of September, 1909. Total number of deaths 425, including typhoid fever 7, measles 1, scarlet fever 16, whooping cough 1, diphtheria 9, tuberculosis 32.

FOREIGN AND INSULAR.

BELGIUM.

No new cases of cholera.^a

The following information dated November 13 was received from Minister Lané at Brussels through the Department of State under date of December 1:

The Belgian minister for foreign affairs reports officially that since October 27 no new case of cholera has occurred in Belgium. Four cases remain under treatment at Boom in the vicinity of Antwerp.

CHINA.

Amoy—Inspection of vessels—Quarantinable diseases.

Passed Assistant Surgeon Foster reports, October 19 and 26:

Week ended October 16. Original bill of health issued, October 12, to the British steamship *Taisang* with 63 in crew and 37 cabin and 162 steerage passengers for Manila. One passenger was rejected for trachoma. The crew and steerage passengers were bathed and their clothing was disinfected by steam. All on board were inspected at time of sailing. Manifests were viséed for 3,096 pieces of freight.

During the week there were reported in Amoy 39 deaths from plague, 27 deaths from cholera, and 1 death from smallpox. One death from typhus fever was reported in the international settlement of Kulangsu.

Week ended October 23. No bills of health issued.

There were reported 38 deaths from plague and 22 from cholera in Amoy.

Hongkong—Examination of emigrants—Inspection of vessels.

Acting Assistant Surgeon Hough reports, October 18 and 25:

Weeks ended October 16 and 23. Quarantine restrictions enforced by and against Hongkong remain as reported October 9 and 16.

Aliens for Honolulu and Pacific coast ports.—Week ended October 16: Examined 267, rejected 44. Week ended October 23: Examined 88, rejected 7.

Aliens for Philippine Islands.—Week ended October 16: Examined 12, rejected 3. Week ended October 23: Examined 6, rejected 2.

^a See Public Health Reports, November 26, 1909, page 1796.

INSPECTION AND DISINFECTION OF VESSELS.

Week ended October 16.

Vessels granted bills of health.....	6
Total members of crews.....	633
Total cabin passengers.....	121
Total steerage passengers.....	345
Members of crews bathed.....	549
Steerage passengers bathed.....	337
Pieces of baggage disinfected.....	883
Vessels disinfected to kill rats.....	2
Crews' quarters disinfected:	
By formaldehyde.....	5
By sulphur.....	1

Week ended October 23.

Vessels granted bills of health.....	8
Total members of crews.....	439
Total cabin passengers.....	84
Total steerage passengers.....	5
Members of crews bathed.....	299
Steerage passengers bathed.....	3
Pieces of baggage disinfected.....	268
Crews' quarters disinfected by formaldehyde.....	5

Shanghai—Inspection of vessels.

Acting Assistant Surgeon Ransom reports, October 27 and November 2:

Week ended October 23. One original and 2 supplemental bills of health issued to 3 steamships, the aggregate personnel of which amounted to 798. There were inspected 118 members of crews and 2 cabin and 12 steerage passengers, and manifests were viséed for 5,559 pieces of freight; 10 pieces were rejected. Twelve pieces of baggage were disinfected by steam. Eleven emigrants for San Francisco per steamship *Manchuria* were passed; 2 were recommended for rejection for trachoma.

Reports from Hankow show 1 case of cholera for the week ended October 16.

Week ended October 30. Supplemental bills of health issued to 3 steamships with a total personnel of 537 and 2 vessels, 117 members of crews, and 3 cabin and 6 steerage passengers inspected. Manifests were viséed for 19,483 packages of freight, and 10 packages of human hair for New York were disinfected by steam. There were bathed 44 members of crews and 6 steerage passengers, and 59 pieces of personal effects were disinfected by steam. Five emigrants for San Francisco, per steamship *Chiyo Maru*, were examined and passed, and 10 were recommended for rejection on account of trachoma.

CUBA.

Cienfuegos—Inspection of vessels.

Acting Assistant Surgeon Suarez reports, November 24:

Week ended November 20.

Vessels inspected.....	3
Bills of health issued.....	8

No quarantinable disease reported.

Habana—Inspection of vessels.

Acting Assistant Surgeon Villoldo reports, November 23 and 30:

Week ended November 20.

Bills of health issued.....	16
Vessels inspected.....	14
Members of crews of outgoing vessels inspected.....	651
Passengers of outgoing vessels inspected.....	350
Inspection certificates issued, shipments of hides.....	3

No cases of quarantinable disease were reported to the sanitary department during the week.

Week ended November 27.

Bills of health issued.....	18
Vessels inspected.....	15
Members of crews of outgoing vessels inspected.....	863
Passengers of outgoing vessels inspected.....	469
Inspection certificates issued, shipments of hides.....	2

The national sanitary department reports for the period from November 10 to 20, 19,848 houses inspected and 91,396 water deposits petrolled, destroyed, or drained.

Matanzas—Inspection of vessels.

Acting Assistant Surgeon Nuñez reports, November 22:

Week ended November 20. Bills of health issued to 2 vessels bound for ports in the United States. No quarantinable disease reported. The department of sanitation reports the inspection of 4,150 houses from November 10 to 20.

Santiago—Inspection of vessels.

Acting Assistant Surgeon Wilson reports, November 24:

Week ended November 20. Bills of health issued to 6 vessels bound for the United States and its dependencies. No vessel disinfected. One new case of leprosy was reported, making 5 cases under observation. The sanitary department reports 3,115 houses inspected.

GERMANY.

Berlin—Status of cholera in East Prussia.

The following information was received from Consul-General Thackara under dates of November 13 and 22:

November 13. A bulletin issued by the imperial health office states that cholera cases and deaths were registered in Prussia from October 31 to November 6 as follows: One case in Labiau (province of Königsberg); 2 cases in Skirwietell (district of Heydekrug); 2 cases in Andreischken (district of Niederung, province of Gumbinnen).

According to a supplementary report for the previous week, a fourth case of cholera occurred in Skopen.

Under date of November 8, the consular agent at Königsberg reports a new case of cholera at Andreischken.

November 22. According to the official bulletin just issued by the imperial health office, 1 new case of cholera occurred during the

period from November 7 to 13 in Andreischken (district of Niederung, province of Gumbinnen).

The consular agent at Königsberg reports that a new case of cholera occurred November 18 in Kolonie Bismarek, district of Heydekrug, East Prussia.

HAWAII.

Plague-prevention work.

Chief Quarantine Officer Hobdy reports, November 15:

HONOLULU.

Last case of rat plague: (Aiea) 9 miles from Honolulu August 22, 1907.

Last case of human plague: Honolulu July 17, 1907.

Week ended November 13, 1909.

Total rats taken.....	547
Trapped.....	547
Found dead.....	0
Examined bacteriologically.....	408
Plague rats found.....	0
Classification of rats trapped:	
<i>Mus alexandrinus</i>	66
<i>Mus musculus</i>	163
<i>Mus norvegicus</i>	61
<i>Mus rattus</i>	257
Average number of traps set daily.....	1,294

HILO.

Last case rat plague: (Hanomu), Hilo, October 11, 1909.

Last case human plague: (Pepeekeo) October 4, 1909.

INDIA.

Bombay—Decrease in plague mortality.

Consul Dennison reports, November 5:

During the week ended November 2 there was a drop in the plague mortality, the deaths being only 3, as compared with 10 in the previous week and a 5 yearly mean of 25. This means that for 4 days out of the 7 there was no plague.

It is worth noting that the city is now more nearly free from plague than has ever before been the case since the plague began.

Smallpox and cholera each accounted for 1 death during the week, and the total mortality in the city was 522, compared with 504 the previous week, 651 the corresponding week of last year, and an average for this season of 599.

Excluding deaths among recent arrivals from the country, the mortality is now 27.49 per thousand of the population, against 26.19 in the period prior to plague.

Calcutta—Cholera, plague, and smallpox.

Acting Assistant Surgeon Allan reports, November 4:

Week ended October 16. In Calcutta there were 7 deaths from cholera and 5 from plague; in Bengal, 63 cases of plague with 61 deaths; in all India, 5,146 cases of plague with 4,175 deaths. Week ended October 23. In Calcutta, 5 deaths from cholera and 5 from

plague; in Bengal, 64 cases of plague with 50 deaths; in all India, 4,815 cases of plague with 3,992 deaths.

Inspection of vessels.—Week ended October 23. Bill of health issued to the steamship *Kattenturm*, bound for Boston and New York, with a total crew of 72. Week ended October 30. Bills of health issued to the steamships *Moltkefels*, bound for Philadelphia and New York, with a total crew of 59, and *Foreric*, bound for Boston and New York, with a total crew of 33. The usual precautions were taken with all these vessels, holds fumigated, rat guards placed on wharf lines, and Asiatics' effects disinfected.

ITALY.

Naples—Examination of emigrants—Smallpox.

Surgeon Geddings reports, November 15:

Vessels inspected at Naples and Palermo, week ended November 13.

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
Nov. 8	Bayonne.....	Philadelphia.....			
9	Roma.....	New York.....	384	108	537
10	Sicania.....	Galveston.....			
10	Duca d'Aosta.....	New York.....	757	167	1,120
12	König Albert.....	do.....	487	106	680
12	Italia.....	do.....	279	35	320
13	Romanic.....	Boston.....	745	182	950
	Total.....		2,652	598	2,607

PALERMO.

Nov. 11	Duca d'Aosta.....	New York.....	349	350	175
13	Italia.....	do.....	215	350	70
	Total.....		564	700	245

Rejections recommended.

NAPLES.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Suspected favus.	Other causes.	Total.
Nov. 8	Bayonne.....						
9	Roma.....	14	1	4		5	24
10	Sicania.....						
10	Duca d'Aosta.....	39	5	25		7	76
12	König Albert.....	13	1	7		2	23
12	Italia.....	10	3	8		4	25
13	Romanic.....	44	3	13		6	66
	Total.....	120	13	57		24	214

PALERMO.

Nov. 11	Duca d'Aosta.....	33		30		9	72
13	Italia.....	23					23
	Total.....	56		30		9	95

Smallpox in Naples.—During the week ended November 14, 20 cases of smallpox, with 7 deaths, were reported at the health office of the city of Naples.

JAPAN.

Yokohama—Inspection of vessels.

Passed Assistant Surgeon Cumming reports, November 4 and 10:

Week ended October 30. Bills of health issued to the following vessels: Steamships *Coblentz* for Manila, *Manchuria* for San Francisco, and *Aki Maru* for Seattle. No quarantinable disease reported in the port or vicinity.

Summary of inspection of emigrants for month of October, 1909.—Examined, 168; rejected, 7; held for observation, 26; passed, 150; bathed, 136 passengers and 31 members of crews; baggage disinfected, 384 pieces.

Week ended November 6. Bills of health issued to: Steamship *Ryggja* for Portland, steamship *Chiyo Maru* for San Francisco via Honolulu, and U. S. supply for Agana, Guam.

During the week 60 would-be steerage passengers for the *Chiyo* were examined, of whom 55 were passed and 5 held. One hundred and forty-four pieces of baggage were disinfected.

No quarantinable disease has been reported in this section of the Empire during the week. One case of plague has been reported in Osaka and the epidemic continues in Kobe.

Examination of emigrants.

Number of emigrants per steamship *Manchuria* for San Francisco via Honolulu October 27, examined 17; for Honolulu rejected 1, held 1; for San Francisco, rejected 2, held 1.

Per steamship *Aki Maru* for Seattle October 27, examined 36, held 7.

Per steamship *Chiyo Maru* for San Francisco via Honolulu November 5, examined 60; for San Francisco, held 2; for Honolulu, held 3.

Per steamship *Asia* for San Francisco via Honolulu November 10, examined 11; for Honolulu, held 3.

Kobe—Cholera and plague.

Acting Assistant Surgeon Smith reports, October 27 and November 5:

Week ended October 23. Supplemental bills of health granted to 5 steamships. There were inspected 623 members of crew and 441 steerage passengers, and 65 members of crew and 68 steerage passengers were bathed and their effects disinfected by steam. The number of pieces of baggage steamed was 353 and bedding 112. Manifests were viséed for 62,693 pieces of freight, amounting to 5,611 tons. During the week 18 cases of human hair and 2 cases of personal effects were disinfected with formalin.

Emigrants examined.—Per steamship *Aki Maru*, for Seattle, passed 17, recommended for rejection 18; per steamship *Manchuria*, for Honolulu, passed 44, recommended for rejection 50; for San Francisco, passed 4, recommended for rejection 2.

The emigrants passed to Honolulu by the steamship *Manchuria*, including 12 Russians, and also 3 intending passengers to Victoria

by the steamship *Aki Maru*, were inspected and bathed, and their effects were disinfected. The emigrants were 7 days in quarantine detention at Ono before embarkation.

The official returns of infectious diseases for the week show that there were reported in Kobe 36 cases of plague with 25 deaths.

Week ended October 30. Supplemental bills of health granted to 3 steamships. There were inspected 202 members of crews. Manifests were viséed for 16,018 pieces of freight, amounting to 2,032 tons. During the week 92 cases of human hair and 17 bales of feathers were disinfected with formalin.

The official returns of infectious diseases for the week show that there were reported in Kobe 12 cases of plague with 12 deaths.

Acting Assistant Surgeon Knight reports, November 10:

Week ended November 6. Supplemental bills of health granted to 4 steamships. There were inspected 555 members of crews and 227 steerage passengers; 54 steerage passengers were bathed and disinfected and their effects were disinfected by steam. The number of pieces of baggage steamed was 190 and bedding 108. Six cases of personal effects were disinfected with formalin.

Emigrants examined.—Per steamship *Chiyo Maru* for Honolulu, passed 35, recommended for rejection, 61; for San Francisco, passed 5, recommended for rejection 6. Per steamship *Asia* for Honolulu, passed 8, recommended for rejection 15; for San Francisco, passed 2, recommended for rejection 2.

The emigrants passed to Honolulu by the steamship *Chiyo Maru*, including 7 Russians, were inspected, bathed, and disinfected, and their effects were disinfected. The emigrants were 7 days in quarantine detention at Ono before embarkation.

The official returns of infectious diseases for the week showed 19 cases of plague with 13 deaths and 1 case of cholera with 1 death at Kobe.

Plague has prevailed in Kobe during the month of October more than during any other month of the year, 80 cases having been reported with 66 deaths, showing a mortality of 82 per cent. The number of rats caught was 61,414 and of plague-infected rats found 280. The infection started in the western part of the city and has made steady progress toward the east, through the mercantile district, and has at present neared the former foreign concession in which are situated the foreign business houses. To date the disease has affected only the poorer classes of Japanese and Chinese.

Nagasaki—Cholera.

Sanitary Inspector Bowie reports, October 21 and 30:

Week ended October 13. Two fatal cases of cholera occurred at Moji in this consular district during the week. Cholera is reported to be seriously prevalent at Vladivostok, which port is in direct communication with Nagasaki by steamer two, three, and occasionally four times a week.

During the week 5 emigrants for Hawaii, 6 for Manila, and 1 for San Francisco were examined. Of this number 1 was held for observation.

Week ended October 30. Two fatal cases of cholera were reported from Wakamatsu in this consular district. Seven emigrants for Hawaii per steamship *Chiyo Maru* were examined and passed. One emigrant destined for San Francisco was held.

MEXICO.

Report from the Superior Board of Health of Mexico—Yellow fever in vicinity of Merida.

In compliance with articles 1 and 2 of the International Sanitary Convention held at Washington October 14, 1905, the president of the Superior Board of Health of Mexico reports, November 29, that for the week ended November 27, 1 case of yellow fever was registered November 26 in the town of Peto, 158 kilometers distant from Merida, and that prophylactic measures against the disease continue to be carried out.

NICARAGUA.

Bluefields, fruit port.

Acting Assistant Surgeon Layton reports:

Week ended November 20. Present officially estimated population, 4,000. No quarantinable disease reported in this port nor in the surrounding country during the week.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Nov. 14	Chelston.....	New York, via Cape Gracias, Nicaragua; Belize, British Honduras; and Inagua, West Indies.	29	2	0
20	Marietta di Georgio.....	New Orleans.....	18	1	0

PHILIPPINE ISLANDS.

Manila—Cholera and smallpox—Inspection of vessels.

Chief Quarantine Officer Heiser reports, October 20 and 28:

Week ended October 16. Fifteen cases of cholera with 12 deaths and 1 case of smallpox occurred in the city of Manila.

Cholera in the provinces.

Province.	Cases.	Deaths.
Camarines.....	89	59
Albay.....	4	4
Bataan.....	72	58
Bohol.....	20	13
Bulacan.....	27	20
Cavite.....	3	2
Cebu.....	41	38
Oriental Negros.....	19	19
Pampanga.....	22	18
Rizal.....	10	8
Tarlac.....	1	1
Total.....	308	240

Week ended October 23. Eighteen cases of cholera, with 18 deaths, and 1 case of smallpox occurred in the city of Manila.

Cholera in the provinces.

Province.	Cases.	Deaths.
Camarines.....	30	27
Bataan.....	81	64
Bohol.....	10	6
Bulacan.....	28	13
Cebu.....	40	36
Oriental Negros.....	26	25
Pampanga.....	10	8
Ilocos Norte.....	27	21
Tarlac.....	4	2
Total.....	256	202

Inspection of vessels.

Week ended October 16. Consular bills of health issued: October 19, the British steamship *Kalibia*, en route from Iloilo to New York, with 59 in crew, granted a supplemental bill of health after the usual inspection of cargo and personnel.

Week ended October 23. October 11, the British steamship *Inveresk*, with 65 in crew, granted a bill of health for New York. Personnel and cargo inspected prior to sailing. October 14, United States Army transport *Logan*, with 193 in crew and 185 cabin and 1,030 steerage passengers, granted bill of health for San Francisco via Nagasaki and Honolulu. Vessel partially disinfected. Baggage and cargo inspected and either disinfected or passed and so labeled. Personnel inspected at hour of sailing.

RUSSIA.

St. Petersburg, status of cholera.

The following information, dated November 9, was received from Chargé d'Affaires Schuyler through the Department of State, under date of December 1:

From October 24 to 30 there were 202 cases of cholera with 123 deaths in Russia, occurring as follows:

Cities and governments.	Cases.	Deaths.
St. Petersburg.....	99	41
Baku.....	2	3
Vladivostok.....	6	3
Governments:		
St. Petersburg.....	11	15
Archangel.....	1	2
Grodno.....	1	1
Vitebsk.....	1	2
Kovno.....	6	4
Tver.....	1	1
Jaroslav.....	8	6
Kostroma.....	11	8
Nijni-Novgorod.....	14	8
Samara.....	16	13
Saratov.....	6	6
Pskov.....	2	.....
Kief.....	2	2
Tchernigov.....	2	.....
Ekaterinaslev.....	5	1
Taurida.....	8	7

Libau—Examination of emigrants.

Acting Assistant Surgeon De Forest reports, November 15:

Week ended November 12. Four hundred and fifty-nine emigrants for steamship *Lituania*, sailing for New York November 16, were examined and at time of sailing will have been in Libau 5 days; pieces of baggage disinfected, 200.

One case of smallpox occurred in Libau.

VENEZUELA.

Caracas—Plague.

Acting Assistant Surgeon Kellogg at La Guaira reports, November 17:

During the week ended October 13, 4 cases of plague with 3 deaths occurred in widely separated foci in Caracas.

La Guaira—Inspection of vessels—Yellow fever.

Acting Assistant Surgeon Kellogg reports, November 7 and 14

INSPECTION OF VESSELS.

Week ended November 6.

Date.	Vessel.	Destination.	Crew.	Passengers transit.	Passengers taken.
Nov. 1	Zulia.....	New York.....	50	3	7
4	Dictator.....	Galveston.....	39	0	0
4	Città di Milano.....	Porto Rico.....	82	41	16
6	Maracaibo.....	New York.....	51	2	9

Week ended November 13.

Nov. 11	Prins Willem V.....	New York.....	66	11	22
11	Guadeloupe.....	Colon.....	171	271	2
15	Mexican.....	Galveston.....	47	6	0

During the past 10 days 5 cases of yellow fever occurred in Maiquetia. Of these, 3 were fatal.

ZANZIBAR.

Zanzibar—History of plague case.^a

Consul Garrels reports, October 26:

The two plague deaths reported October 26 occurred October 23, and were bacteriologically verified. Both of the patients were natives of India, one being the wife of a leading banker and broker. None of the rats caught in the vicinity in which the deaths occurred show traces of the disease. From May 1 to October 21, 1909, 32,211 rats have been examined and none found to be infected.

It is the opinion of the local health officer that the occurrence of plague in Zanzibar is the result of a direct infection from goods and wearing apparel brought from India. He bases his belief on the fact that no rats show infection and that the cases are isolated and occur only among the Hindoos.

^a See Public Health Reports, November 5, 1909, page 1683.

Cholera, yellow fever, plague, and smallpox.

(These tables include cases and deaths recorded in reports received by the Surgeon-General, Public Health and Marine-Hospital Service, from American consuls through the Department of State and from other sources from June 26 to December 10, 1909. For reports received from December 25, 1908, to June 25, 1909, see PUBLIC HEALTH REPORTS for June 25, 1909. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.)

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Belgium:				
Antwerp.....*	Oct. 26-30.....	9	6	At Boom, 10 miles distant.
China:				
Amoy.....	June 13-Oct. 23.....		375	Among Europeans; Sept. 11, epidemic.
Chefoo.....	Aug. 28.....		5	
Hankow.....	July 17-Oct. 16....	14	5	Sept. 25, still present among natives; Oct. 9, present in vicinity.
Kang Chau.....	Apr. 1-June 30....	4	2	On s. s. Hudson; Aug. 7, present among foreigners and natives; Oct. 2, still present among natives.
Shanghai.....	July 26-31.....	3	1	
Kulangsu.....	Oct. 2.....		3	Present in vicinity; Aug. 28, 3 cases, 2 deaths, on s. s. Waishing.
Swatow.....	May 11-29.....			
Germany:				
Allenstein district ^a	Oct. 24-Nov. 12.....	6		Near Russ.
Andreischken district.....	Oct. 20-Nov. 18.....	10	2	
Konigsberg.....	July 21.....		1	
Labiau district.....	Nov. 1-6.....	4		
Niederung district.....	Oct. 16-Nov. 1.....	5	2	
Pakalisne.....	Sept. 20.....	2	1	
Skirwietell.....	Oct. 23-Nov. 6.....	5		
Skopen.....	Oct. 23-30.....	5		
Stoltzenhagen.....	Sept. 18.....		1	
Tilsit.....	Oct. 11.....		1	
India:				
Bombay.....	May 30-Oct. 19.....		421	25 miles from Stettin.
Calcutta.....	May 16-Oct. 9.....		952	
Madras.....	May 29-Aug. 20.....		7	
Negapatam.....	May 8-Sept. 17.....		7	
Rangoon.....	May 16-Oct. 16.....		67	
Indo-China:				
Saigon.....	May 9-Oct. 2.....	24	18	
Japan:				
Amagasaki.....	Aug. 14-21.....	4		On s. s. Taian Maru. July 31, 1 case on s. s. Mile.
Kagawa, prefecture.....	Aug. 8-14.....	7		
Karatsu.....	Sept. 1-9.....	11	2	
Kobe.....	Sept. 6-Nov. 6.....	4	2	
Kyoto.....	Oct. 10-26.....	200	98	
Moji.....	Oct. 9-16.....	4	2	Present.
Shikoku, island:				
Matsuyama.....	Oct. 20.....			
Wakamatsu.....	Oct. 39.....	2	2	
Java:				
Batavia.....	Sept. 12-Oct. 9.....	542	171	Among natives and Chinese.
Korea:				
Chemulpo.....	Aug. 28.....			Epidemic in northern part.
Seoul.....	Sept. 11-23.....			Epidemic.
	Sept. 19-29.....	1,072	651	Sept. 29, epidemic at Fusen Peng Yan and along the Yalu River.
Manchuria:				
Dalny.....	Aug. 11-Oct. 9.....	27	22	Case Aug. 11 on s. s. Kobe Maru.
Liaoyang.....	Aug. 10.....		1	
Mukden.....	Aug. 14.....		1	
Tashihchiao.....	Aug. 11.....		1	
Yinkou.....	Aug. 14.....	6	1	
Netherlands, The.				
	Aug. 20-Sept. 4.....			5 deaths among boatmen from Rotterdam.
Amsterdam.....	Sept. 10.....	1	1	Present.
Breda.....	Aug. 30-Sept. 4.....	1		
Dirksland.....	Sept. 10.....	1		
Dordrecht.....	Aug. 30.....			
Garkum.....	Aug. 30-Sept. 4.....	1		
Honsweert.....	Sept. 27-Oct. 2.....	3		
Hattem.....	Oct. 1-8.....	4	1	
Hoisteren.....	Sept. 1-7.....	1		
Hoogvliet.....	Sept. 1-7.....	1		
Lopik.....	Sept. 27-Oct. 2.....	2		

^a Case reported October 30 proved not to be Asiatic cholera.

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Netherlands, The—Continued.				
Middleburg.....	Sept. 4.....	1	.....
Pernis.....	Sept. 1-7.....	2	.....
Rotterdam.....	Aug. 20-Sept. 11.....	34	15	
Tholen.....	Sept. 4.....	1	.....
Uithoorn.....	Aug. 30-Sept. 4.....	1	.....
Utrecht, province—				
Jaarsveld.....	Oct. 20-Nov. 1.....	2	1	
Utrecht.....	Sept. 4.....	1	.....
Vlaardinger.....	Sept. 4.....	1	.....
Philippine Islands:				
Manila.....	July 11-Oct. 23.....	139	111	Fourth quarter 1908, 308 cases and 190 deaths; first quarter 1909, 1 death (imported); second quarter 1909, no cholera.
Provinces.....				Fourth quarter 1908, 7,330 cases and 4,292 deaths; first quarter 1909, 2,221 cases and 1,405 deaths; second quarter 1909, 961 cases and 630 deaths.
Albay.....	Aug. 27-Oct. 16.....	266	269	
Ambos Camarines.....	July 4-Oct. 23.....	764	550	
Bataan.....	Sept. 5-Oct. 23.....	246	196	
Bohol.....	Aug. 28-Oct. 23.....	137	83	
Bulacan.....	July 4-Oct. 23.....	371	360	
Cagayan.....	July 11-Sept. 18.....	222	117	
Cavite.....	Sept. 16-Oct. 16.....	7	6	
Cebu.....	May 18-Oct. 23.....	426	340	
Dapitan.....	May 9-15.....	.....	.....	Present.
Ilocos Norte.....	Aug. 15-Oct. 23.....	152	85	
Iloilo.....	May 23-June 19.....	28	18	
Isabela.....	July 18-24.....	5	4	
Leyte.....	June 6-Sept. 25.....	28	14	
Moro.....	May 29-July 3.....	9	9	
Mountain.....	June 20-26.....	27	15	
Negros, Occidental.....	May 9-15.....	8	2	
Negros, Oriental.....	May 16-Oct. 23.....	811	584	
Pampanga.....	May 9-Oct. 23.....	649	326	
Pangasinan.....	June 13-19.....	1	.....
Rizal.....	July 25-Oct. 23.....	33	27	
Samar.....	May 9-July 10.....	42	26	
Sorsogon.....	May 9-15.....	8	2	
Tarlac.....	July 4-Oct. 23.....	59	43	
Russia, general.....	May 23-Oct. 10.....	11,777	4,944	July 23, present in Kreutzburg, Mahlgaben, Muravjevo, Pinea, Radsiwilischki, Reval, Schaulen, and Tver.
Alexandrovsok.....	Aug. 28-Oct. 1.....	10	8	
Archangel.....	June 26-Oct. 1.....	355	191	
Astrachan.....	Sept. 17-Oct. 1.....	14	7	
Baku, government.....	July 4-Oct. 1.....	2	.....
Chmalysk, district.....	July 1.....	1	.....
Courland.....	July 5-Oct. 1.....	245	107	
Cronstadt.....	June 30-Sept. 17.....	66	26	
Dorpat.....	Aug. 14-20.....	1	.....
Drissa.....	July 23-Sept. 17.....	38	17	
Estonia, government.....	July 1-Aug. 21.....	4	3	
Finland, general.....	July 16.....	1	.....
Mariengam.....	June 23-24.....	1	1	
Viborg.....	July 9-16.....	1	.....
Gadjatschesk.....	Aug. 3-Sept. 3.....	53	18	
Griva.....	Sept. 25-Oct. 1.....	128	56	
Hungerburg.....	July 30-Oct. 1.....	11	7	
Jaroslav, government.....	Sept. 11-Oct. 1.....	361	177	
Jaroslav.....	July 4-Oct. 1.....	470	237	
Kem.....	Aug. 8-Oct. 1.....	47	24	
Kharkov.....	Aug. 1-Sept. 3.....	20	10	
Kherson.....	Oct. 1.....	1	.....
Kief.....	Sept. 11-Oct. 1.....	26	17	July 30, present.
Kostroma.....	July 23-Oct. 1.....	186	64	
Kretsky, district.....	July 1.....	1	.....
Livonia.....	July 5-Aug. 21.....	85	41	
Mitau.....	July 15-Oct. 1.....	28	17	
Mohilve, government.....	Aug. 2-Oct. 1.....	131	67	
Moscow.....	July 9-Oct. 9.....	26	9	
Nishni Novgorod.....	July 4-Sept. 17.....	57	31	
Novgorod, government.....	July 4-Oct. 1.....	393	131	
Olonets, government.....	June 20-Aug. 14.....	11	7	
Perm.....	Aug. 2-Oct. 1.....	27	11	
Polotzk.....	June 27-Oct. 1.....	711	202	
Poltava, government.....	Aug. 15-Oct. 1.....	105	47	

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Russia—Continued.				
Pskov.....	July 1-Sept. 17....	120	42	
Reval.....	Aug. 21-27.....	2		
Riga.....	July 1-Oct. 16....	327	129	
Rjasin.....	June 24-July 6....	3	3	
Rubinsk.....	July 30-Sept. 17....	185	103	
Samara.....	Aug. 15-17.....	5	2	
Saratov.....	Aug. 15-Oct. 1....	7	1	
Simbirsk.....	July 13.....	2		
St. Petersburg, government.	June 9-Oct. 10....	919	476	
St. Petersburg.....	June 2-Oct. 22....	5,857	2,271	
Tver, government.....	Aug. 15-Oct. 1....	348	81	
Viatka, government.....	July 6-24.....	2	2	
Vilna.....	July 11-Aug. 21....	61	20	
Vitebsk, government.....	July 9-Sept. 17....	703	261	
Vologda, government.....	May 31-Oct. 1....	544	234	
Slam:				
Bangkok.....	Apr. 25-May 28....	1		
Siberia:				
Vladivostok.....	Sept. 23-Oct. 16....	52	18	
Straits Settlements:				
Singapore.....	May 9-Sept. 18....		20	
Sumatra:				
Djambi.....	July 15-Aug. 20....	220	113	Among natives.
Palembang.....	Sept. 28.....			Present.
Sweden:				
Stockholm.....	Aug. 12.....	1		Imported.

YELLOW FEVER.

Barbados, general.....	June 13-Aug. 14....	2	1	St. Joseph Parish, December to June, 14 deaths not previously reported.
Brazil:				
Bahia.....	May 22-Oct. 22....	47	23	
Manaos.....	May 23-Oct. 23....		12	Apr. 24-May 1-2 deaths. Reported out of date.
Para.....	May 30-Nov. 6....	79	63	
Pernambuco.....	Apr. 15-Aug. 31....		11	
British Guiana:				
Suddie.....	July 22.....	1	1	35 miles from Georgetown.
Ecuador:				
Guayaquil.....	May 23-Oct. 23....		62	
Mexico:				
Merida.....	June 5-Nov. 6....	14	6	Sept. 11, 2 cases imported from the district of Acanceh.
Peto.....	Nov. 26.....	1		
Tekik.....	Oct. 1.....	1		
Veracruz.....	Sept. 24.....		1	On s. s. Sonora.
Panama:				
Canal Zone—				
Ancon.....	Mar. 1-31.....			1 case at Culebra Island quarantine station, from a vessel, and 1 fatal case en route from Guayaquil.
Venezuela:				
Malquetia.....	Aug. 15-Nov. 6....	7	6	

PLAGUE.

Australia:				
Adelaide.....	Apr. 30-June 12....	2	2	And vicinity.
Bunbury.....	June 4.....	1		On s. s. Zoroaster.
Mackay.....	Jan. 21-June 6....	2	2	
Sydney.....	Apr. 18-May 29....	5	1	
Azores:				
Terceira.....	June 16.....	3	1	
Bahrein Island, Persian Gulf...	May 29-June 10....		6	
Brazil:				
Bahia.....	May 22-Oct. 22....	64	49	
Pernambuco.....	Sept. 1-15.....		1	
Rio de Janeiro.....	May 17-Oct. 10....	7	3	
British East Africa:				
Kisumu.....	July 10-Aug. 24....	12	12	
Chile:				
Antofagasta.....	May 9-30.....	13	5	Oct. 16, still present.
Iquique.....	May 20-Sept. 22....	23	12	Do.
Mejillones.....	May 4-Oct. 16....			Present.

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy.....	June 1-Oct. 23.....		1,179	
Canton.....	May 9-Aug. 7.....	325	211	
Chang-Poo.....	July 23.....			Epidemic.
Chinchew.....	May 22.....			Do.
Eng-Ta-Tau.....	July 1-31.....	11	4	
Hankow.....	Oct. 9.....			1 case on river steamer.
Hongkong.....	May 2-Aug. 18.....	92	83	
Kang-be.....	July 24.....	61	59	
Kang Thau.....	Apr. 1-July 31.....	125	62	
Pollan.....	May 23-29.....	8	7	
Swatow district.....	May 16-July 3.....		450	July 1, 200 cases still present in Touchowfu and Yin Shan.
Swatow.....	May 16-July 19.....		2	
Ecuador:				
Babohoyo.....	Sept. 21.....			Present.
Chunchi.....	June 1-30.....	3	1	
Duran.....	July 16-31.....	3		Sept. 21, again present.
Guayaquil.....	May 23-Oct. 9.....	149	90	
Huigra.....	May 1-June 15.....	16	3	
Egypt:				
Alexandria.....	May 30-Sept. 20.....	14	10	
Port Said.....	May 29-Oct. 27.....	15	6	
Provinces—				
Assiout.....	May 14-Sept. 28.....	48	8	
Beherach.....	June 14-Sept. 8.....	37	14	
Galvobeeeyeh.....	June 2-Sept. 6.....	10	2	
Garbieh.....	June 2-Nov. 2.....	49	19	
Fayum.....	June 3-23.....	15	6	
Menouf.....	Jan. 18-Aug. 17.....	87	17	
German East Africa:				
Muanza district.....	Apr. 30-May 22.....		12	
Hawaii:				
Hilo.....	Aug. 19-Oct. 4.....	4	3	Cases Sept. 6 and 19 at Papalkou.
Honolulu.....	July 20.....	1		The case arrived on the s. s. Korea, had been ill 11 days, and probably received infection at Hongkong.
Olaa plantation.....	Aug. 20-22.....	3	2	
India:				
Bombay Presidency and Sind.....	May 16-Oct. 2.....	10,027	7,309	
Madras Presidency.....	May 16-Oct. 2.....	2,948	1,838	
Bengal.....	May 16-Oct. 2.....	1,250	1,015	
United provinces.....	May 16-Oct. 2.....	5,725	5,051	
Punjab.....	May 16-Oct. 2.....	7,810	6,624	
Burma.....	May 16-Oct. 2.....	1,581	1,487	
Central provinces, including Berar.....	May 16-Oct. 2.....	4,488	3,759	
Mysore State.....	May 16-Oct. 2.....	2,514	1,808	
Hyderabad State.....	Sept. 12-Oct. 2.....	81	62	
Central India.....	July 18-Oct. 2.....	1,411	920	
Rajputana and Ajmer-Merwara.....	May 16-Oct. 2.....	2,089	1,676	
Northwest Province.....	Sept. 26-Oct. 2.....	1		
Kashmir.....	May 16-Sept. 25.....	5	4	
Grand total.....		39,930	31,553	
Indo-China:				
Salgon.....	May 9-Sept. 13.....	114	110	
Japan:				
Formosa.....	May 23-July 17.....	223	156	In south and central ports.
Kobe.....	May 30-Nov. 6.....	173	129	Hiogo ken, including Kobe, Jan. 1 to Oct. 22, 150 cases.
Osaka.....	July 4-Nov. 6.....	2	1	
Nagasaki.....	Sept. 11.....			Present on a vessel.
Shikoku, island.....	July 17-Aug. 3.....	3	1	Oct. 20, present in Koki and Matsuyama.
Shimonoseki.....	Sept. 11.....			Present.
Tokyo.....	June 26.....	3		
Yokohama.....	May 25-Aug. 7.....	28	24	
Mauritius.....	Apr. 1-Sept. 9.....	36	31	
Morocco:				
Casablanca.....	July 15-Oct. 4.....		5	Among troops.
Peru:				
Arequipa, department.....	May 8-Sept. 23.....	15	4	
Chala.....	July 3-15.....			Present.
Mollendo.....	July 3-15.....			Do.
Gajamarca, department.....	May 8-July 15.....	20	6	
Callao, department.....	May 8-Aug. 12.....	10	4	
Callao.....	June 20-Aug. 7.....			Present. Sept. 1, again present.

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru—Continued.				
Ica, department.....	July 3-Sept. 9.....	2	.....
Lambayeque, department..	May 8-Aug. 12.....	18	11	
Eten.....	July 15.....	.....	.....	Present.
Libertad, department.....	May 8-Sept. 23.....	26	13	
Salaverry.....	July 15.....	.....	.....	Do.
Lima, department.....	May 8-Sept. 23.....	37	16	
Cerro Azul.....	July 15.....	.....	.....	Do.
Moquegua, department.....	July 16-29.....	6	2	
Ilo.....	July 15.....	.....	.....	Do.
Pescadores Islands.....	June 27-July 3.....	4	.....	From s. s. Lodore.
Piura, department.....	June 18-Sept. 23.....	46	33	
Paíta.....	June 20-July 15.....	.....	.....	Present.
Russia:				
Kirgisenaul.....	Aug. 5-8.....	19	18	In the Ural district to Aug. 14, 22 deaths.
Siám:				
Bangkok.....	Apr. 25-Aug. 28.....	22	22	
Trinidad:				
Port of Spain.....	June 13-July 18.....	6	5	
Turkey in Asia:				
Adalia.....	June 25-July 29.....	5	3	
Beirut.....	June 25-July 4.....	1	.....	In Harrett Aryk.
Uruguay:				
Montevideo.....	May 1-June 30.....	.....	2	
Venezuela:				
Caracas.....	June 18-Nov. 11.....	15	5	
Zanzibar.....	July 14-Nov. 8.....	6	6	

SMALLPOX.

Algeria:				
Algiers.....	May 1-Sept. 30.....	27	23	
Bona.....	June 1-Oct. 31.....	55	29	
Arabia:				
Aden.....	Aug. 3-9.....	.....	1	
Argentina:				
Buenos Aires.....	Mar. 1-Aug. 31.....	.....	74	
Rosario.....	Apr. 1-July 31.....	3	3	
Austria:				
Bohemia.....	Sept. 26-Oct. 2.....	1	.....	Imported.
Galicia.....	June 6-July 31.....	6	.....
Silesia.....	June 20-Aug. 7.....	17	.....
Belgium:				
Antwerp.....	July 18-24.....	4	.....
Brazil:				
Bahia.....	May 22-Oct. 22.....	155	86	
Para.....	Oct. 23-30.....	2	2	
Pernambuco.....	Apr. 1-Sept. 15.....	.....	110	
Rio de Janeiro.....	May 17-Oct. 10.....	90	31	
Santos.....	May 10-16.....	.....	1	
São Paulo.....	May 10-July 18.....	.....	12	
Canada:				
British Columbia—				
Vancouver.....	June 1-July 31.....	4	.....
Nova Scotia—				
Halifax.....	June 13-Aug. 7.....	5	.....
Ontario—				
Hamilton.....	Sept. 1-30.....	2	.....
Quebec—				
Montreal.....	June 17.....	.....	.....	2 cases additional at Grosse Isle on s. s. Virginian.
Quebec.....	Nov. 14.....	1	.....	On s. s. Dominion from Liverpool.
Ceylon:				
Colombo.....	May 23-29.....	2	.....
Chile:				
Valparaiso.....	Oct. 10-16.....	2	.....	May 16-Aug. 28, present.
Santiago.....	May 29-Aug. 21.....	.....	.....	Present.
China:				
Amoy.....	June 1-Sept. 11.....	.....	32	May 9-15, present.
Eng-Ta-Tau.....	July 1-31.....	9	.....
Hankow.....	Aug. 21.....	1	.....	Apr. 26-June 12, present among natives.
Hongkong.....	May 2-June 26.....	16	12	
Kang Chau.....	Apr. 1-June 30.....	7	1	
Newchwang.....	Aug. 1-14.....	2	1	

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China—Continued.				
Shanghai.....	May 10-Oct. 3.....		9	Sept. 25, still present among natives. Sept. 4, 1 case on s. s. Wilmington.
Tientsin.....	June 27-July 3.....	1	2	
Egypt, general.....	Apr. 30-Oct. 7.....	1,601	371	
Alexandria.....	June 1-30.....	3		
Cairo.....	May 21-Sept. 30.....		20	
Suez.....	May 21-Nov. 4.....	47	5	
Ecuador:				
Ensenada.....	Aug. 25.....			Epidemic.
Guayaquil.....	June 1-Aug. 10.....	3		In July, 4 cases and 1 death in vicinity.
France:				
Bordeaux.....	Sept. 4.....		1	
Marseille.....	June 1-Oct. 31.....		8	
Nantes.....	July 1-31.....	1		
Paris.....	May 23-Oct. 2.....	41	3	
Toulon.....	July 25-31.....		1	
Germany, general.....	May 30-Sept. 25.....	23		
Gibraltar.....	Aug. 8-Oct. 24.....	4		
Great Britain:				
Cardiff.....	July 6.....	1		
Liverpool.....	June 21-26.....	2		Case, June 22, from s. s. Canada.
London.....	Oct. 3-23.....	2		
Greece:				
Athens.....	Sept. 19-25.....		2	
Hungary:				
Budapest.....	Sept. 26-Oct. 9.....	2	1	
India:				
Bombay.....	May 26-Oct. 12.....		96	
Calcutta.....	May 16-Sept. 4.....		128	
Madras.....	May 22-Oct. 22.....		24	
Rangoon.....	May 12-Oct. 16.....		34	
Indo-China:				
Saigon.....	May 9-Aug. 7.....	21	20	
Italy, general.....	May 31-Nov. 14.....	487		
Genoa.....	June 1-Oct. 15.....	21		
Naples.....	May 31-Nov. 14.....	172	68	
Ottiana.....	June 23.....	1		
Rome.....	Mar. 7-13.....	1	1	
Japan:				
Formosa.....	June 13-19.....	1		
Moji.....	June 6.....	1		From s. s. Selja.
Osaka.....	Jan. 1-May 31.....	3		
Yokohama.....	June 1-7.....	1		
Java:				
Batavia.....	May 6-Sept. 11.....	31	1	
Malta:				
Valetta.....	Sept. 11-18.....	3		
Mauritius:				
Port Louis.....	Apr. 1-30.....	1	1	
Mexico.....				Oct. 31, present at Orizaba, Puebla, and along the lines of railroad.
Acapulco.....	Oct. 19-25.....	1		
Aguascalientes.....	June 21-27.....		1	
Chihuahua.....	Aug. 16-22.....	1		
Guadalajara.....	June 11-Sept. 9.....		4	
Medellin.....	Oct. 31.....	1		Oct. 24, present in vicinity.
Mexico.....	May 16-Oct. 23.....		94	
Monterey.....	June 14-Nov. 21.....		31	
Soledad.....	Oct. 24.....	3		
Veracruz.....	June 1-Oct. 31.....	29	9	Aug. 12-Oct. 2, 7 cases imported from Medellin. Oct. 26, 1 case from Orizaba and 1 case on s. s. Montevideo.
Newfoundland:				
St. Johns.....	Sept. 4.....	3		
Norway, general.....	Apr. 1-May 30.....	3		
Panama:				
Canal Zone—				
Ancon.....	Mar. 1-31.....	1		At Culebra Island quarantine station; from a vessel.
Persia:				
Gulian, province.....	Oct. 4.....			Present.
Khorassan.....	June 1-30.....			Epidemic.
Kurdistan.....	June 1-30.....			Do.
Mazanderan.....	July 1-Sept. 30.....			Do.
Meshed-i-Sur.....	Sept. 30.....			Present in June; epidemic in vicinity.
Shiraz.....	May 1-31.....			Present.
Turbat-i-Haidari.....	May 1-31.....			Do.

Cholera, yellow fever, plague, smallpox, etc.—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru:				
Lima.....	July 4-10.....	1		In the lazaretto.
Mollendo.....	Aug. 28.....			Present.
Philippine Islands:				
Manila.....	May 9-Oct. 23.....	19	8	Fourth quarter, 1908, 28 cases and 8 deaths; first quarter, 1909, 55 cases and 16 deaths; second quarter, 1909, 76 cases and 9 deaths.
Iloilo, province.....	July 1-Aug. 31....	237	142	
Portugal:				
Lisbon.....	May 30-Oct. 9.....	150		
Russia:				
Libau.....	May 6-Nov. 12....	6	1	
Moscow.....	May 16-Oct. 9.....	261	114	
Odessa.....	May 30-Oct. 9.....	106	22	
Riga.....	June 6-Oct. 2.....	74		May 1-Sept. 30, 39 deaths.
St. Petersburg.....	May 16-Sept. 25....	369	87	
Warsaw.....	Apr. 25-Sept. 18....		29	
Slam:				
Bangkok.....	Apr. 25-June 28....	2	1	
Siberia:				
Vladivostok.....	May 15-June 3....	4	1	
Spain:				
Almeria.....	June 1-Sept. 30....		14	
Barcelona.....	June 1-Nov. 8.....		81	
Huelva.....	May 1-Sept. 30....		43	
Madrid.....	May 1-Oct. 31.....		594	
Seville.....	May 1-June 30.....		2	
Tarragona.....	July 20-26.....		1	
Valencia.....	May 20-Oct. 23....	78	3	
Vigo.....	May 23-Oct. 16....		18	
Straits Settlements:				
Penang.....	Aug. 15-21.....	1		
Singapore.....	May 16-July 10....		2	
Switzerland:				
Argau, canton.....	June 20-26.....	1		
Fribourg, canton.....	June 13-19.....	1		
Geneva.....	May 30-June 26....	9		
Tripoli:				
Tripoli.....	May 23-Oct. 30....	209	30	
Turkey in Asia:				
Bagdad.....	July 19.....			Present in interior.
Bassorah.....	May 9-Sept. 25....			Present.
Hadjin.....	May 23-June 26....			Do.
Hadjin.....	July 19.....			Do.
Smyrna.....	May 7-Oct. 15.....		254	
Turkey in Europe:				
Constantinople.....	May 31-Oct. 31....		11	
Uruguay:				
Montevideo.....	Apr. 1-Sept. 30....		25	

MORTALITY.

Weekly mortality table, foreign and insular cities.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.
Aberdeen.....	Nov. 6	181,918	45									1	1
Do.....	Nov. 13		45									1	
Algiers.....	Nov. 6	155,000	234	43					1	3			1
Amsterdam.....	Nov. 13	566,366	121	21									
Antwerp.....	Nov. 6	323,921	87	9						2			
Athens.....	Oct. 30	241,058	73	12						2		1	
Barranquilla.....	Oct. 22	40,000	16							2			
Do.....	Oct. 30		24	1						1			
Do.....	Nov. 6		17							2			

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Basel.....	Nov. 6	131,000	32	5										
Batavia.....	Oct. 16	217,630	96			90			1					
Bergen.....	Nov. 6	87,749	15	1								2		2
Birmingham.....	Nov. 13	558,336	133								3			2
Bradford.....	Oct. 30	293,983	69	11								2		
Do.....	Nov. 6		74	6									2	
Belfast.....	Nov. 13	386,576	130	25						2		1		
Berlin.....	Oct. 30	2,108,233	565	95						3	10	19	3	4
Bristol.....	Nov. 13	377,642	95	5									2	5
Brussels.....	Nov. 6	704,975	198	17										
Cairo.....	Nov. 4	704,836	450	23						2	2	3	2	
Canton.....	Oct. 9	1,000,000	300	25					6					
Do.....	Oct. 16		275	20						10				
Chihuahua.....	Nov. 7	37,000	31	2						2				
Cienfuegos.....	Nov. 13	37,000	12							2				
Constantinople.....	Nov. 7	1,000,000	225	31						7	3		1	
Copenhagen.....	Oct. 30	450,000	100	11							1			
Damascus.....	Oct. 30	250,000	49											
Dresden.....	Nov. 6	550,100	146	18										
Dundee.....	Nov. 15	169,409	44	6					2		1	1		2
Edinburgh.....	Nov. 6	355,366	85	3									5	1
Do.....	Nov. 13		95	12							1	1	1	1
Frontera de Tabasco.....	Nov. 7	9,000	9											
Georgetown.....	Oct. 30	56,000	44	7										1
Ghent.....	Nov. 6	164,579	51											
Gothenburg.....	do.....	72,300	39	9								3	1	
Guadalajara.....	Nov. 4	125,000	79								1			
Do.....	Nov. 11		69											
Guayaquil.....	Oct. 16	7,000	65	10	8		1					1		2
Do.....	Oct. 23		65	5	13		5							1
Do.....	Oct. 30		90	10	16		4							2
Halifax.....	Nov. 20	5,000	10	1								1		1
Hamburg.....	Nov. 6		226	20								6	1	3
Hilo.....	Oct. 30		9							2				7
Do.....	Nov. 6		4											
Do.....	Nov. 13		9	1					1					
Hull.....	do.....		74											5
Kobe.....	Oct. 30		239		16					1		2		
Leeds.....	Nov. 13	484,012	126	11					3				1	
Leith.....	Nov. 6	85,721	19	3								2		
Do.....	Nov. 13		22	4				1						
Liebau.....	Nov. 7	90,000					1							
Liege.....	Nov. 6	175,000	40	5							1			
Liverpool.....														

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.
Port Elizabeth.....	Oct. 30	32,959	11	3									
Quebec.....	Nov. 20		1									1	
Rio de Janeiro.....	Oct. 17	811,443	221	53									
Do.....	Oct. 24		233	55							1	1	1
Rotterdam.....	Nov. 13	416,384	119							2			
St. John.....	Nov. 20		8			2		1	1	1	1		
Salaverry.....	Nov. 3	1,750	1										
Santa Cruz de Tenerife..	Nov. 6	46,000	16	2								1	
Schiedam.....	Nov. 13	31,863	10	1									
Sheffield.....	Nov. 6	472,000	88	3							1	1	1
Do.....	Nov. 13		109	10						1	2	1	
Southampton.....	do.....	124,667	24	4									1
Stettin.....	Nov. 6	230,000	87	5							4	1	1
Suez.....	Sept. 9	19,786	13	1						1			
Do.....	Sept. 23		11	11								1	
Do.....	Oct. 7		16	16						1			
Do.....	Oct. 21		5					1					
Do.....	Nov. 4		12					1					
Tarragona.....	Nov. 13	20,400	7	1							1		
Tientsin.....	Oct. 23		16	6									
Do.....	Oct. 30		21	4									
Tripoli.....	Sept. 11	42,000	1					2					
Do.....	Sept. 18		2					3					
Do.....	Sept. 25		2					1				1	
Valencia.....	Nov. 13	249,000	79	7						1		2	
Veracruz.....	Nov. 6		31	7									
Do.....	Nov. 13		33	5									
Vienna.....	Nov. 6	2,085,888	588	91							6	4	1
Winnipeg.....	Nov. 20	122,000	29	5						1			
Yarmouth.....	do.....	6,800										1	
Zanzibar.....	Oct. 14	75,900	26	4									
Do.....	Oct. 21		22	3									

MORTALITY—FOREIGN AND INSULAR—COUNTRIES AND CITIES—
UNTABULATED.

AZORES—St. Michaels.—Month of August, 1909. Total number of deaths 284, including enteric fever 2, tuberculosis 4. Month of September, 1909. Total number of deaths 263, including typhoid fever 3, whooping cough 1, tuberculosis 5.

CHILE—Punta Arenas.—Month of September, 1909. Total number of deaths 45, including 3 from tuberculosis.

FORMOSA—Tamsui.—Week ended October 23, 1909. Total number of deaths 12, including enteric fever 2, diphtheria 2.

FRANCE—Nantes.—Month of October, 1909. Total number of deaths 220, including typhoid fever 2, diphtheria 1, tuberculosis 43.

GREAT BRITAIN—Ireland.—Week ended November 13, 1909. Twenty-one town districts. Total number of deaths 177, including 1 death from each of the following diseases: Scarlet fever, whooping cough, diphtheria, and enteric fever.

MALTA.—Week ended November 6, 1909. Total number of deaths 96, including enteric fever 1, tuberculosis 3.

RUSSIA—Libau.—Month of October, 1909. Deaths include scarlet fever 6, diphtheria 1, measles 2.

Riga.—Month of September, 1909. Total number of deaths 655, including cholera 28, smallpox 3, typhus fever 6, enteric fever 9, scarlet fever 28, diphtheria 8, measles 3, whooping cough 1, tuberculosis 62.

SOUTH AFRICA—Johannesburg.—Two weeks ended October 16, 1909. Total number of deaths 139, including enteric fever 4, scarlet fever 3, whooping cough 1, tuberculosis 20. Two weeks ended October 2, 1909. Total number of deaths 133, including typhoid fever 8, tuberculosis 16.

Kimberley.—Month of October, 1909. Total number of deaths from all causes 82.

SPAIN—Cadiz.—Month of October, 1909. Total number of deaths 72, including typhoid fever 2, whooping cough 9, tuberculosis 28.

Huelva.—Month of October, 1909. Total number of deaths 69, including smallpox 12, diphtheria 2, tuberculosis 5.

Madrid.—Month of October, 1909. Total number of deaths 1,120, including smallpox 103, typhus fever 16, enteric fever 9, scarlet fever 1, diphtheria 12, measles 4, whooping cough 8, tuberculosis 138.

TASMANIA—Hobart.—Month of September, 1909. Total number of deaths 168, including enteric fever 7, tuberculosis 13.

The following cases of and deaths from smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended December 3, 1909:

SMALLPOX—UNITED STATES.

Place.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Montgomery.....	Nov. 13-20.....	12	.....
Birmingham.....	do.....	1	.....
District of Columbia:				
Washington.....	do.....	1	.....
Florida:				
Jacksonville.....	do.....	1	.....
Georgia:				
Macon.....	Nov. 15-28.....	5	.....
Indiana:				
Muncie.....	Nov. 13-20.....	2	.....
Kansas:				
Kansas City.....	do.....	3	.....
North Dakota:				
Grand Forks County.....	Sept. 1-30.....	2	.....
Utah.....	Oct. 1-31.....	117	1	In 8 counties.
Washington:				
Spokane.....	Nov. 6-13.....	1	.....
Wisconsin:				
La Crosse.....	Nov. 13-20.....	1	.....

SMALLPOX—INSULAR.

Philippine Islands:				
Manila.....	Oct. 9-23.....	2	.....

SMALLPOX—FOREIGN.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia.....	Oct. 15-22.....	15	10	
Para.....	Oct. 23-30.....	1	1	
Pernambuco.....	Sept. 1-15.....		20	
China:				
Amoy.....	Oct. 9-16.....		1	
Egypt:				
Suez.....	Oct. 14-Nov. 4.....	1	2	
India:				
Madras.....	Oct. 9-15.....		1	
Italy, general.....	Nov. 1-14.....		82	
Naples.....	Nov. 7-14.....	20	7	
Mexico:				
Mexico City.....	Oct. 2-9.....		4	
	Oct. 16-23.....		2	
Monterey.....	Oct. 14-21.....		1	
Persia:				
Guilan, province.....	Oct. 4.....			Present.
Mazanderan.....	do.....			Do.
Russia:				
Libau.....	Nov. 1-7.....	2	1	
	Aug. 1-31.....	18	12	
Riga.....	Sept. 1-30.....	11	3	
Spain:				
Almeria.....	Oct. 1-31.....		3	
Madrid.....	do.....		103	

YELLOW FEVER.

Brazil:				
Bahia.....	Oct. 15-22.....	1	1	
Manaos.....	Oct. 16-23.....		1	
Para.....	Oct. 23-Nov. 6.....	8	7	
Ecuador:				
Guayaquil.....	Oct. 9-23.....		6	
Venezuela:				
La Guaira.....	Oct. 27-Nov. 6.....	5	2	In vicinity.

CHOLERA—INSULAR.

Philippine Islands:				
Manila.....	Oct. 9-16.....	15	12	
	Oct. 16-23.....	18	18	
Provinces.....	Oct. 9-16.....	308	240	
	Oct. 16-23.....	256	202	

CHOLERA—FOREIGN.

China:				
Amoy.....	Oct. 8-23.....		49	
Germany:				
Andreischken.....	Nov. 7-13.....	2		
Heydekrug, district.....	Nov. 18.....	1		
India:				
Bombay.....	Oct. 12-19.....		4	
Madras.....	Oct. 9-15.....		1	
Japan:				
Kobe.....	Oct. 30-Nov. 6.....	1	1	
Moji.....	Oct. 6-13.....	2	2	
Wakamatsu.....	Oct. 23-30.....	2	2	

December 10, 1909

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PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia.....	Oct. 14-22.....	10	6	
Pernambuco.....	Sept. 1-15.....		1	
China:				
Amoy.....	Oct. 9-23.....		77	
India, general.....	Oct. 9-16.....	4,815	3,992	
Bombay.....	Oct. 12-26.....		24	
Japan:				
Kobe.....	Oct. 16-Nov. 6.....	67	50	
Osaka.....	Nov. 10.....	1		

By authority of the Secretary of the Treasury:

WALTER WYMAN,

Surgeon-General,

United States Public Health and Marine-Hospital Service.